CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

8700.1 CHG 21

4/10/01

SUBJ: GENERAL AVIATION OPERATIONS INSPECTOR'S HANDBOOK

1. PURPOSE. This change revises and updates information and incorporates published handbook bulletin HBGA 99-04, Limitations on the Use of a Congested Area Plan under 14 CFR Part 133, into chapter 102.

2. DISTRIBUTION. This change is distributed to all addresses on special distribution list ZFS-870. An electronic message will be disseminated to Flight Standards employees (principally to aviation safety inspectors, which this change affects) to indicate when this change is electronically published, which chapters are affected, and which bulletins are incorporated and will provide the Universal Resource Locator (URL): <http://www.faa.gov/avr/afs/faa/8700/8700.html>. (There will be simultaneous electronic publication on the appropriate FAA Intranet site.) The public, industry groups, and other DOT/FAA offices can also access the updated chapters at this URL.

3. EXPLANATION OF CHANGES. This change to the 8700.1 handbook uses change bars to indicate updates and additional statements to clarify existing policies. Paragraph numbering changes or reference changes of FAR to 14 CFR are not signified by change bars. Filled out samples of Federal Aviation Administration (FAA) forms are replaced only for visual clarity. Changes to these chapters are updates to: terminology used to clarify existing policy, paragraph numbering to follow a sequential pattern, paragraph formatting, and clerical changes. Changes also include the incorporation of a Flight Standards handbook bulletin for General Aviation and Commercial Division (HBGA). Existing policies and regulations remain unaffected with this change. A list of acronyms is added to this change as Appendix 1.

a. **Chapter 34,** Accept/Approve Flight Training Devices and Certain Other Devices Previously Authorized for Use.

b. **Chapter 52,** Issue a Certificate of Waiver for Motion Picture and Television Filming.

c. **Chapter 53,** Surveillance of a Motion Picture and Television Filming Production Event.

d. **Chapter 96,** Introduction to Part 133 Related Tasks.

e. **Chapter 97,** Conduct Initial Certification/Renewal of a Part 133 Operator.

f. **Chapter 98,** Evaluate a Rotorcraft-Load Combination Flight Manual (RLCFM).

g. **Chapter 101,** Conduct a Part 133 Base Inspection.

h. **Chapter 102,** Evaluate a Part 133 Congested Area Plan (CAP).

i. **Chapter 103,** Monitor a Part 133 Congested Area Operation.

j. **Chapter 180,** Introduction to Investigation and Compliance Related Tasks.

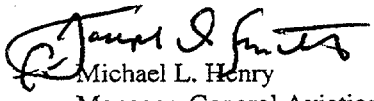
k. **Appendix 1,** Acronyms and Abbreviations.

j. **Index,** Comprehensive Index (previously Appendix 1).

4. DISPOSITION OF TRANSMITTAL. This transmittal is to be RETAINED AND FILED IN THE BACK OF THIS HANDBOOK until it is superseded by a new basic order.

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
General Table of Contents, pp. i-vii	4/26/00	General Table of Contents, pp. i-vii	4/10/01
Vol. 1 Table of Contents, pg. i	4/26/00	Vol. 1 Table of Contents, pg. i	4/10/01
Vol. 2 Table of Contents, pp. i-xiii	4/26/00	Vol. 2 Table of Contents, pp. i-xiii	4/10/01
Vol. 2, pp. 34-1 - 34-12	2/27/97	Vol. 2, pp. 34-1 - 34-14	4/10/01
Vol. 2, pp. 52-1 - 52-20	2/9/96	Vol. 2, pp. 52-1 - 52-30	4/10/01
Vol. 2, pp. 53-1 - 53-13	3/1/92	Vol. 2, pp. 53-1 - 53-12	4/10/01
Vol. 2, pp. 96-1 - 96-4	2/27/97	Vol. 2, pp. 96-1 - 96-4	4/10/01
Vol. 2, pp. 97-1 - 97-32	2/27/97	Vol. 2, pp. 97-1 - 97-34	4/10/01
Vol. 2, pp. 98-1 - 98-26	2/3/94	Vol. 2, pp. 98-1 - 98-24	4/10/01
Vol. 2, pp. 101-1 - 101-11	2/3/94	Vol. 2, pp. 101-1 - 101-10	4/10/01
Vol. 2, pp. 102-1 - 102-12	2/3/94	Vol. 2, pp. 102-1 - 102-14	4/10/01
Vol. 2, pp. 103-1 - 103-5	2/3/94	Vol. 2, pp. 103-1 - 103-6	4/10/01
Vol. 2, pp. 180-1 - 180-48	2/11/00	Vol. 2, pp. 180-1 - 180-48	4/10/01
Appendix 1, pp. 1-1 - 1-16	4/26/00	Appendix 1, pp. 1-1 - 1-4	4/10/01
Appendix 2, 2-1 - 2-2	4/26/00	Appendix 2, pp. 2-1 - 2-2	4/10/01
Appendix 2, Inspector Feedback Sheet	--	Appendix 2, Inspector Feedback Sheet	--
Appendix 3, pp. 3-1 - 3-2	4/26/00	Appendix 3, pp. 3-1 - 3-2	4/10/01
Appendix 4, pp. 4-1 - 4-2	4/26/00	Appendix 4, pp. 4-1 - 4-2	4/10/01
		Index, pp. 1 - 16	4/10/01



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GENERAL TABLE OF CONTENTS

VOLUME 1. GENERAL CONCEPTS

VOLUME 2. GENERAL AVIATION INSPECTOR (OPERATIONS) TASKS AND RESPONSIBILITIES

14 CFR PART 61 CERTIFICATION OF PILOTS AND FLIGHT INSTRUCTORS

GENERAL TABLE OF CONTENTS—Continued

GENERAL TABLE OF CONTENTS—Continued

GENERAL TABLE OF CONTENTS—Continued

GENERAL TABLE OF CONTENTS—Continued

GENERAL TABLE OF CONTENTS—Continued

GENERAL TABLE OF CONTENTS—Continued

VOLUME 1. TABLE OF CONTENTS

VOLUME 1. GENERAL CONCEPTS

VOLUME 2. TABLE OF CONTENTS

VOLUME 2. GENERAL AVIATION INSPECTOR (OPERATIONS) TASKS AND RESPONSIBILITIES

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

VOLUME 2. TABLE OF CONTENTS—Continued

CHAPTER 34. ACCEPT/APPROVE FLIGHT TRAINING DEVICES AND CERTAIN OTHER DEVICES PREVIOUSLY AUTHORIZED FOR USE

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE: 1371

2. OBJECTIVE. The objective of this task is to determine the status of, and accept/approve for continued use under Title 14 of the Code of Federal Regulations (14 CFR) parts 61 and 141, flight training devices and certain ground training devices formerly authorized for use by Federal Aviation Administration (FAA).

3. GENERAL.

A. Devices Formerly Authorized for Use. For a number of years, the General Aviation and Commercial Division, AFS-800, maintained copies of previously issued letters of authorization (LOA) pertaining to the use of ground training devices (GTD) under parts 61 and 141. These letters are outdated and several models of the GTD's, although still in use, are no longer being manufactured. This highlights the need for the FAA to update and clarify it's policy concerning the use of these devices.

(1) For many years, the FAA granted approval for the use of GTD's in the form of LOA's, issued by AFS-800 or its predecessor office. These LOA's were based upon the subjectively determined ability of the training devices to:

(a) effectively duplicate maneuvers and/or procedures specified for given airman training requirements, or structured training programs,

(b) meet specified airman currency requirements,

(c) accomplish all or part of specified airman competency checks, and/or

(d) conduct a limited portion of the airman certification practical test for an instrument rating.

(2) For over 20 years, these LOA's were issued authorizing use of GTD's on a case-by-case basis. Decisions were driven by the needs of a particular program or the permissible use authorized under the existing regulations. The FAA has no valid means of ensuring that the devices are still capable of performing the intended functions for which they were originally authorized, except through a program of re-evaluation and qualification. However, the FAA has elected to continue the previously authorized use of these devices, where it is determined to be appropriate, in accordance with (IAW) this chapter.

B. Recent Simulator Technology. Recent breakthroughs in computer technology have permitted development of highly sophisticated computerized electronics and computer-generated visual imagery in aircraft simulators and training devices. Authority for the increased use of simulators and training devices has been incorporated in the various regulations related to the training and certification of pilots.

C. Expanded Use of Simulators. The FAA has indicated its commitment to permit the expanded use of aircraft flight simulators and flight training devices in connection with the training and practical testing of pilots, as the state of the art develops and public interest dictates. The simulator approval criteria contained in the current edition of Advisory Circular (AC) 120-40, Airplane Simulator Qualification, are periodically updated along with advancing simulator technology, in order to ensure maximum transfer in flightcrew behavior and to ensure that the simulator or training device factually represents the aircraft and flight environment.

4. LEVELS OF AIRPLANE FLIGHT TRAINING DEVICES. Levels of airplane flight training devices (FTD) and their definitions are covered in detail in the current edition of AC 120-45, Airplane Flight Training Device Qualification. This flight training equipment consists of seven levels of FTD's, four levels of flight simulators, and the aircraft. The following are functional descriptions of current FTD and simulator levels:

A. Level 1 Flight Training Devices. Those GTD's previously issued an LOA by AFS-800 and given conferred status under AC 120-45 are now designated

as level 1 FTD's and may continue to be used as authorized IAW 14 CFR § 61.4, effective August 2, 1996. The permissible use of these devices is, *only* as originally authorized and shown in paragraph 6A through G.

B. Level 2 Flight Training Devices.

(1) The purpose of a level 2 training device is to permit learning, development, and the practice of skills and cockpit procedures necessary for understanding and operating the integrated systems of a single set of aircraft.

(2) A level 2 training device has the following characteristics and components:

(a) Instruments, equipment, panels, systems, and controls sufficient for the training/checking events to be accomplished, located in a spatially correct configuration, which may be in a cockpit or an open flight deck area. Actuation of controls and switches must replicate those in the airplane.

(b) The device must simulate aerodynamic capability and control forces and travel sufficiently to manually fly an instrument approach.

C. Level 3 Flight Training Devices.

(1) The purpose of a level 3 training device is to permit learning, development, and the practice of skills and cockpit procedures necessary for understanding and operating the integrated systems of a single set of aircraft.

(2) A level 3 training device has the following characteristics and components:

(a) Same as level 2, but in addition it must have a cockpit, as defined in AC 120-45.

(b) The navigation controls, displays, and instrumentation must be as set out in 14 CFR part 91, § 91.205, for operation IAW instrument flight rules (IFR).

D. Level 4 Flight Training Devices.

(1) The purpose of a level 4 training device is to permit learning, development, and the practice of skills and cockpit procedures necessary for understanding and operating the integrated systems of a specific aircraft.

(2) A level 4 training device has the following characteristics and components:

(a) A replica of the flight deck panels, switches, controls, and instruments in proper relationship, to represent the aircraft for which training is to be accomplished.

(b) Systems indications which respond appropriately to switches and controls which are required to be installed for the training or checking to be accomplished.

(c) Air/ground logic (however, simulated aerodynamic capabilities are not required).

E. Level 5 Flight Training Devices.

(1) The purpose of a level 5 training device is to permit learning, development, and the practice of skills, cockpit procedures, and instrument flight procedures necessary for understanding and operating the integrated systems of a specific aircraft in typical flight operations in real time.

(2) A level 5 training device has the following characteristics and components:

(a) A replica of the flight deck panels, switches, controls, and instruments, in proper relationship, to represent the aircraft for which training is to be accomplished.

(b) Systems indications which respond appropriately to switches and controls which are required to be installed for the training or checking to be accomplished.

(c) Simulated aerodynamic capabilities representative of the aircraft group or class.

(d) Functional flight and navigational controls, displays, and instrumentation.

(e) Control forces and control travel of sufficient precision for manually flying an instrument approach.

F. Level 6 Flight Training Devices.

(1) The purpose of a level 6 training device is to permit:

(a) Learning, development, and the practice of skills in cockpit procedures, instrument flight procedures, certain symmetrical maneuvers and flight

characteristics necessary for operating the integrated systems of a specific aircraft in typical flight operations; and

(b) The use of previously approved nonvisual simulators and the continued use of advanced training devices for those part 135 operators approved to use them.

(2) A level 6 training device has the following characteristics and components:

(a) Systems indications which respond appropriately to switches and controls which are required to be installed.

(b) A replica of the cockpit of the aircraft for which training is to be accomplished.

(c) Simulated aerodynamic capabilities which closely represent the specific aircraft in ground and flight operations.

(d) Functional flight and navigational controls, displays, and instrumentation.

(e) Control forces and control travel which correspond to the aircraft.

(f) Instructor controls.

G. Level 7 Flight Training Devices.

(1) The purpose of a level 7 training device is to permit learning, development, and the practice of skills in cockpit procedures, instrument flight procedures and maneuvers, and flight characteristics necessary for operating integrated systems of a specific aircraft in typical flight operations.

(2) A level 7 training device has the following characteristics and components:

(a) Systems representations, switches, and controls which are required by the type design of the aircraft and by the approved training program.

(b) Systems which respond appropriately and accurately to the switches and controls of the aircraft being simulated.

(c) Full-scale replica of the cockpit of the aircraft being simulated.

(d) Correct simulation of the aerodynamic and ground dynamic characteristics of the aircraft being simulated.

(e) Correct simulation of the effects of selected environmental conditions which the simulated aircraft might encounter.

(f) Control forces, dynamics, and travel which correspond to the aircraft.

(g) Instructor controls and seat.

H. Level A Flight Simulator.

(1) The purpose of a level A simulator is to permit development and practice of the necessary skills for accomplishing all required training and certification maneuvers and procedures, to a prescribed standard of airman competency, in a specific aircraft.

(2) Level A flight simulators have the following characteristics and components:

(a) Systems representations, switches, and controls which are required by the type design of the aircraft and by the user's approved training program.

(b) Systems which respond appropriately and accurately to the switches and controls of the aircraft being simulated.

(c) Full-scale replica of the cockpit of the aircraft being simulated.

(d) Correct simulation of the aerodynamic characteristics of the aircraft being simulated.

(e) Correct simulation of the effects of selected environmental conditions which the simulated aircraft might encounter.

(f) Control forces and travel which correspond to the aircraft.

(g) Instructor controls and seat.

(h) At least a night visual system with the minimum of a 45° horizontal by 30° vertical field of view for each pilot station.

(i) A motion system with at least 3° of freedom.

I. Level B Flight Simulator.

(1) The purpose of a level B simulator is to permit development and practice of the necessary skills for accomplishing all required training and certi-

fication maneuvers and procedures, to a prescribed standard of airman competency, in a specific aircraft.

(2) Level B flight simulators have the following characteristics and components:

(a) Systems representations, switches, and controls which are required by the type design of the aircraft and by the user's approved training program.

(b) Systems which respond appropriately and accurately to the switches and controls of the aircraft being simulated.

(c) Full-scale replica of the cockpit of the aircraft being simulated.

(d) Correct simulation of the aerodynamic (including ground effect) and ground dynamic characteristics of the aircraft being simulated.

(e) Correct simulation of the effects of selected environmental conditions which the simulated aircraft might encounter.

(f) Control forces and travel which correspond to the aircraft.

(g) Instructor controls and seat.

(h) At least a night visual system with a minimum of a 45° horizontal by 30° vertical field of view for each pilot station.

(i) A motion system with at least 3° of freedom.

J. Level C Flight Simulator.

(1) The purpose of a level C simulator is to permit development and practice of the necessary skills for accomplishing all required training and certification maneuvers and procedures, to a prescribed standard of airman competency, in a specific aircraft. All training and testing tasks may be conducted in a level C flight simulator for persons who meet certain experience requirements outlined in part 142 and volume 2, chapter 148.

(2) Level C flight simulators have at least the following characteristics and components:

(a) Systems representations, switches, and controls which are required by the type design of the aircraft and by the user's approved training program.

(b) Systems which respond appropriately and accurately to the switches and controls of the aircraft being simulated.

(c) Full-scale replica of the cockpit of the aircraft being simulated.

(d) Correct simulation of the aerodynamic (including ground effect), and ground dynamic characteristics of the aircraft being simulated.

(e) Correct simulation of the effects of selected environmental conditions which the simulated aircraft might encounter.

(f) Control forces, dynamics, and travel which correspond to the aircraft.

(g) Instructor controls and seat.

(h) At least a night and dusk visual system with a minimum of a 75° horizontal by 30° vertical field of view for each pilot station.

(i) A motion system with at least 6° of freedom.

K. Level D Flight Simulator.

(1) The purpose of a level D simulator is to permit development and practice of the necessary skills for accomplishing all required training and certification maneuvers and procedures, to a prescribed standard of airman competency, in a specific aircraft. Level D flight simulators may be used for all flight task training and practical testing except for static aircraft training, for pilots who meet certain experience requirements outlined in part 142 and volume 2, chapter 148.

(2) Level D flight simulators have the following characteristics and components:

(a) Systems representations, switches, and controls which are required by the type design of the aircraft and by the user's approved training program.

(b) Systems which respond appropriately and accurately to the switches and controls of the aircraft being simulated.

(c) Full-scale replica of the cockpit of the aircraft being simulated.

(d) Correct simulation of the aerodynamic (including ground effect) and ground dynamic characteristics of the aircraft being simulated.

(e) Correct simulation of selected environmentally-affected aerodynamic and ground dynamic characteristics of the aircraft being simulated considering the full range of its flight envelope in all approved configurations.

(f) Correct and realistic simulation of the effects of environmental conditions which the aircraft might encounter.

(g) Control forces, dynamics, and travel which correspond to the aircraft.

(h) Instructor controls and seat.

(i) A daylight, dusk, and night visual system with the minimum of a 75° horizontal by 30° vertical field of view for each pilot station.

(j) A motion system with at least 6° of freedom.

5. POLICY.

A. Evaluation and Qualification Process. The issuance of AC 120-45 formalized the FAA's evaluation and qualification process for training devices in which the training, qualification, or certification of airmen under existing regulations is accomplished. The FAA will no longer provide copies of previously issued LOA's for those devices given conferred status and now designated as Level 1 FTD's, but will follow the guidance contained in this chapter.

B. Conferred Status/Level 1 FTDs. Effective August 2, 1996, 14 CFR § 61.4 provides the regulatory basis for the continued use of these Level 1 devices, but only as originally authorized. AC 120-45 also contains guidance to permit the updating of these training devices to meet the qualification standards set forth in the AC (see figure 34-1).

(1) Any models of the above devices stated in paragraph 4 which have not been sold for use within the United States and/or issued an LOA by AFS-800 prior to August 2, 1996, are ineligible for use. All such devices, if presented for use under part 61 or 141, will be evaluated for qualification and such approved use as may be given them under the existing regulations, which apply at that time.

(2) All new models of the above devices stated in paragraph 4 manufactured after August 1, 1996, which are not reproductions of models given conferred status, such as new designs, are ineligible for conferred status and/or Level 1 classification. Such devices, if presented for use under parts 61 or 141, will be evaluated for qualification and such approved use as may be given them under the existing regulations, which apply at that time.

C. Devices Previously Issued LOA's. Only those devices having been previously issued an LOA by AFS-800, or its predecessor office, and placed into service prior to August 2, 1996, (see paragraph 6 of this section for a listing of all such devices) may be used, to the extent originally authorized by AFS-800, to satisfy the permissible use authorizations contained in part 61 and the appendices of part 141. These devices are now classified as level 1 FTD's IAW AC 120-45 and are authorized for use under § 61.4, subject to the following conditions:

(1) The device must continue to perform, handle, and operate as it did when first placed into service as a GTD.

(2) The owner/operator of the device shall annually attest to the fact that the device continues to operate as indicated in paragraph C(1), in writing to the Administrator.

(3) The Level 1 FTD is approved for use, by the local Flight Standards District Office (FSDO), in an FAA-approved flight training program and/or under part 61, consistent with any limitations on its use contained in the original AFS-800 LOA, or as limited by current regulations.

D. Flight Testing Device Standards. After August 1, 1996, unless otherwise permitted under the regulations, FTD's must meet the standards of AC 120-45 or AC 120-40 in order to be used in an FAA-approved training program for the purpose of fulfilling actual flight training, testing, or checking credits, as applicable.

6. THE USE OF TRAINING DEVICES FORMERLY (APPROVED) UNDER AC 61-66 AND TRAINING DEVICES FORMERLY CONSIDERED GTD'S. Training devices formerly approved for use under AC 61-66, Annual Pilot In Command Proficiency Checks, (now canceled), to conduct proficiency checks under former § 61.58(c) may continue to be used as originally authorized. These and other training devices formerly considered to be GTD's and now classified as Level 1 FTD's may continue to be used but only as previously authorized. (For GTDs replicating helicopter, see subparagraph G of this paragraph.) The following listing provides the maximum authorizations for use of these Level 1 FTD's, formerly considered GTD's, and previously

issued an LOA from AFS-800. The use of higher level (2 through 7) FTD's is described in the Task vs. Simulation Device Level Appendix of practical test standards (PTS) for the instrument rating, commercial pilot certificate, and airline transport pilot certificate. This chapter also provides guidance relating to the permissible use of all FTD's listed herein until superseded by the adoption of pertinent regulatory amendment(s) or other specific FAA policy guidelines for their use. When equipped with an enclosed pilot station, the below listed FTD's, with the exception of the ATC 510 and the Mini-simulator II C Models, meet the requirements of 14 CFR § 141.41 for the minimum percent of permissible FTD use specified throughout part 141 appendices. With the further addition of an X-Y Plotter, these FTD's, with the exception of the ATC 510 and the Mini-simulator II C models, meet the requirements of 14 CFR § 141.41(b) and may be used to meet the 100 percent maximum authorization, provided total FTD time is devoted to instrument training and its use is approved in a training course outline.

A. For Use Under 14 CFR § 61.57(c)(1). Authorization for pilot use of a level 1 FTD to acquire the simulated instrument experience described under paragraph C(1)(i), (ii), and (iii) of this section when this use is certified by an authorized ground or flight instructor:

- Aviation Simulation Technology, Inc.: AST 201 and 300 Models
- ATC Flight Simulator Company: ATC 112H, 510, 610, 710, 810, and 920 Models
- Frasca International, Inc.: 121, 122, 131, 132, 141, 142, 241, 242, 242T, and 342 Models
- Models Inverted-A, Inc.: Mini-simulator II C Models
- Pacer Systems Corporation: MK II Models
- Gestic Electronics, Inc.: Spira 180 and 280 Models

B. For Use Under 14 CFR § 61.57(d)(1)(ii). Regulatory authorization for pilot use of a level 1 FTD to conduct all or part of an instrument proficiency check, consisting of a representative number of tasks required for the instrument rating practical test when given by an authorized instructor:

- Aviation Simulation Technology, Inc.: AST 201 and 300 Models
- ATC Flight Simulator Company: ATC 112H, 610, 710, 810, and 920 Models
- Frasca International, Inc.: 121, 122, 131, 132, 141, 142, 241, 242, 242T, and 342 Models
- Pacer Systems Corporation: MK II Models
- Gestic Electronics, Inc.: Spira 180 and 280 Models

C. For Use Under 14 CFR § 61.65(e)(2). Regulatory authorization for pilot use of a level 1 FTD to acquire 20 hours of instrument instruction given by an authorized ground or flight instructor:

- Aviation Simulation Technology, Inc.: AST 201 and 300 Models
- ATC Flight Simulator Company: ATC 112H, 510, 610, 710, 810, and 920 Models
- Frasca International, Inc.: 121, 122, 131, 132, 141, 142, 241, 242, 242T, and 342 Models
- Inverted-A, Inc.: Mini-simulator II C Models, (limited to 10 hours)
- Pacer Systems Corporation: MK II Models
- Gestic Electronics, Inc.: Spira 180 and 280 Models

D. For Use Under 14 CFR § 61.65(a)(8)(ii). Administrative authorization for pilot use of a Level 1 FTD to perform the Instrument Approach Procedures (IAP) not selected for testing in an aircraft or in an approved flight simulator as limited under this section, during the practical test for an instrument rating.

- Aviation Simulation Technology, Inc.: AST 201 and 300 Models
- ATC Flight Simulator company: ATC 112H, 610, 710, 810, and 920 Models
- Frasca International, Inc.: 121, 122, 131, 132, 141, 142, 241, 242, 242T, and 342 Models
- Pacer Systems Corporation: MK II Models
- Gestic Electronics, Inc.: Spira 180 and 280 Models

E. For Use Under 14 CFR § 61.129(i)(1)(i). Regulatory authorization for pilot use of a level 1 FTD to acquire 50 hours of instruction given by an authorized ground or flight instructor:

- Aviation Simulation Technology, Inc.: AST 201 and 300 Models
- ATC Flight Simulator Company: ATC 112H, 610, 710, 810, and 920 Models
- Frasca International, Inc.: 121, 122, 131, 132, 141, 142, 241, 242, 242T, and 342 Models

- Inverted-A, Inc.: Mini-simulator II C Models, (limited to 10 hours)
- Pacer Systems Corporation: MK II Models
- Gestic Electronics, Inc.: Spira 180 and 280 Models

F. For Use Under 14 CFR § 61.159(a)(3)(i)(iii)). Regulatory authorization for pilot use of a level 1 FTD to acquire not more than 25 hours of simulated instrument time when given as instruction by an authorized ground or flight instructor as limited under this section:

- Aviation Simulation Technology, Inc.: AST 201 and 300 Models
- ATC Flight Simulator Company: ATC 112H, 510, 610, 710, 810, and 920 Models
- Frasca International, Inc.: 121, 122, 131, 132, 141, 142, 241, 242, 242T, and 342 Models
- Inverted-A, Inc.: Mini-simulator II C Models, (limited to 10 hours)
- Pacer Systems Corporation: MK II Models
- Gestic Electronics, Inc.: Spira 180 and 280 Models

G. Re-evaluation of Devices formerly considered GTD's.

(1) *Airplane Devices.* When information or circumstances indicate that the feature(s) of a device, formerly given conferred status and now classified as Level 1 FTD for which the FAA has authorized continued permissible use under the regulations, renders the device out of calibration as defined by the manufacturer, or incapable of performing its originally intended function, the device should be re-evaluated by the jurisdictional FSDO. Upon re-evaluation, if the device is found acceptable, its use under an FAA-approved training course outline or under other specific FAA authorization(s) should be reviewed to ensure full compliance with the regulations and information pertaining to the authorized use of that device provided in memo form to AFS-800. Should the device be found unacceptable for use previously authorized, the inspector should notify AFS-800 with details of the evaluation and any recommendations concerning the continued or permissible use of the device for consideration by AFS-800 and/or appropriate coordination with the manager of the National Simulator Program, AFS-205, Atlanta, Georgia.

(2) *Helicopter Devices.* A device replicating a helicopter and formerly authorized for use under the regulations prior to August 2, 1996, must be re-evaluated for use under regulations that became effective August 2, 1996. Effective that date, 14 CFR § 61.4(b) provides the regulatory basis for the continued use of that device as originally authorized. No Advisory Circular (AC) guidance such as that in AC 120-45A, Airplane Flight Training Device Qualification has been established for GTD's replicating a helicopter. However, the latter AC may provide helpful guidance that will assist in determining the continued permissible use of a helicopter device. When upon re-evaluation, the helicopter device is found to be acceptable for use as previously authorized, its use under an FAA-approved training course outline or under other specific FAA authorization(s) should be reviewed to ensure full compliance with the applicable regulations. Should the device be found to be unacceptable for use as previously authorized, a detailed report of the evaluation and any recommendations for the continued or permissible use of this device, should be submitted to AFS-800 for consideration. After appropriate coordination with the manager of the National Simulator Program, AFS-205, AFS-800 will determine what permissible use of the device is appropriate under 14 CFR § 61.4(b).

H. For use of a Device Formerly Considered a GTD. For any use of a device formerly considered a GTD other than as outlined herein or under the conferred status of AC 120-45, refer to volume 2, chapter 148.

I. The Use of Simulators (Approved According to AC 120-40) or Airplane Flight Training Devices (Approved According to AC 120-45) to Conduct § 61.58(a) (formerly § 61.58(a)(2) Pilot-in-Command (PIC) Proficiency Checks. Section 61.58(a) requires that to serve as PIC of an aircraft certificated for more than one pilot crewmember, the PIC must have completed a proficiency check in the particular type aircraft since the beginning of the 24th calendar-month before the month in which the pilot acts as PIC. Section 61.58(e) provides that the check or test required by this section may only be performed in a qualified simulator IAW applicable provisions set forth in the regulations. However, those devices formerly approved under AC 61-66 for the conduct of this proficiency check may continue to be used for that purpose.

7. QUALIFICATION AND APPROVAL OF NEW OR MODIFIED FLIGHT TRAINING DEVICES.

A. New training devices placed into service after August 2, 1996, and modifications to existing Level 1 FTDs are ineligible for conferred status under AC 120-45A, paragraph 14. Therefore these devices must be evaluated for level qualification in order to be approved for such use as deemed appropriate under the existing regulations. Three such devices have been evaluated by FAA and authorized for use under applicable regulations as Level 1 or higher FTDs:

- Emulations Systems Model ES-200, S#203
- 3130 Skyway Drive, Suite 309, Santa Maria, CA93455
- Frasca Models 242 and 135/R22, Frasca International Inc., 906 East Airport Rd. Urbana, IL 61801.
- Copies of letters issued authorizing specific use of these devices is maintained by AFS-800 in accordance with paragraph C.

B. After August 2, 1996, when a new FTD is to be qualified and approved for use in Levels 1 through 5 or a modification is made to an existing model of an FTD IAW AC 120-45A, paragraph 14b, the FSDO in whose jurisdiction that device is located will ensure that the appropriate reference data report (engineering data) pertaining to the qualification and approval of that device, and its authorized use under the applicable regulations, is provided to AFS-205 for review and concurrence in the qualification and approval of the device. Following concurrence by AFS-205, notification of approval in memo form must be sent to AFS-800 with concurrent issuing of FAA authorization for the use of the device.

C. AFS-800 will maintain an active list of all such devices subsequently qualified in Levels 1 through 5 and approved for use under parts 61, 141, and other applicable regulations. The following information is to be submitted to AFS-800 regarding FTDs qualified for use by FSDO inspectors in Levels 1 through 5:

(1) The name and address of the FTD manufacturer;

(2) The make/model, application FAA Systems Engineering Office/Aviation Medical Examiner and date of manufacture;

(3) The Level(s) for which the device is qualified;

(4) The specific maneuvers and/or procedures for which the device is authorized for use; and

(5) The 14 CFR sections believed applicable to the above authorized use.

D. This policy is necessary to permit Flight Standards to satisfy its oversight responsibility in providing clear and effective national policy guidance regarding the authorized use of the simulation technology represented by these devices. Ultimately, FAA plans to track the qualification and use of Level 1 through 5 FTD's in the Flight Standards Automation System (FSAS).

NOTE: Flight Standards District Office inspectors should be aware that a new or modified FTD qualified and approved in Levels 1 through 5, for which the information listed above has not been recorded by AFS-800, is not authorized for use under existing federal regulations.

8. EXEMPTIONS.

A. Exemptions. The FAA has issued exemptions from numerous sections of part 61 to permit the exemption holder to complete various flight training and testing requirements in an FAA-approved flight simulator, subject to specified conditions and limitations. For example, the pilot taking a proficiency check must have completed three landings within the past 90 days, in the particular type aircraft for which the proficiency check is required, if the simulator is not approved for the landing maneuver.

B. Inspector Familiarity with Exemptions. Each FSDO will take necessary action to ensure that the simulator approval criteria outlined in AC 120-40 is followed closely. Inspectors should be familiar with exemptions issued to ensure that trainees receive the required training from the exemption holder and the conditions and limitations of the exemptions are strictly observed.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of Advisory Circulars (AC) 120-40 and 120-45; PTS; 14 CFR parts 1, 61, and 91; FAA policies; and qualification as an ASI (operations).

B. Coordination. This task may require coordination with the National Simulator Program Manager (NSPM).

2. REFERENCES, FORMS AND JOB AIDS.

A. References.

- Parts 1, 61, 135, 121, 141 and 142
- AC 120-40, Airplane Simulator Qualification
- AC 120-45, Airplane Flight Training Device Qualification
- FAA Order 8400.10, Air Transportation Operations Inspector's Handbook

B. Forms.

- None.

C. Job Aids.

- Sample letter of authorization (figure 34-1)

3. PROCEDURES.

A. Applicant requests an LOA for, or the re-evaluation of, a FTD or a GTD for airplanes or helicopters.

(1) When an applicant requests an LOA, determine if the training device has been given conferred status.

(a) If the training device was not previously given conferred status, is a new device, or if it was evaluated after August 1, 1996, it must be "Level" qualified, under the provisions of AC 120-45 or re-evaluated under paragraph 6G(2) as applicable, to determine its permissible use, if any, under 14 CFR § 61.4(b).

(b) If the training device was previously given conferred status, it's continued use is permissible as outlined in AC 120-45 and 14 CFR § 61.4, as well as outlined in this chapter. However, if the device was previously given conferred status and has been modified, but has not, for any reason, demonstrated that it meets the standards of a specific level, confer or continue temporary status if the following conditions are met:

i. The device was manufactured prior to February 5, 1992, and a letter was issued by AFS-800 authorizing its specific use; and

ii. Local Flight Standards District Office (FSDO) personnel have been notified that a modification is pending.

(2) In consultation with the NSPM and AFS-800, determine if the performance of the modified device either meets, or exceeds, that of the original equipment as outlined under AC 120-45, paragraph 14b.

NOTE: This determination is solely subjective in nature and is based upon those maneuvers/ procedures for which the device had been previously approved for use. In the interest of information gathering, request that the person(s) involved in the design and/or installation of the modification provide documentation, test results, other significant data, and conclusions to the FSDO.

(3) Inspect the exemptions, if applicable, to ensure the following:

(a) That the simulator approval criteria outlined in AC 120-40 is closely followed.

(b) That trainees will receive the required training from the exemption holder.

(c) That conditions and limitations of the exemptions will be strictly observed.

(4) Check the manufacturer's data to determine if the device is capable of performing its intended function.

B. Inspect the Device. Conduct the inspection of the device by performing the following:

(1) Qualify the device under AC 120-45.

(2) Approve a training program, if any, in which the device is to be used.

(3) Determine the specific maneuvers and procedures or tasks identified in PTS for which authorization for use will be granted.

C. Complete the Evaluation.

(1) If the device is found to be acceptable, issue the LOA detailing the following:

(a) The qualification of the training device under AC 120-45.

(b) The approval of a training program in which the device is to be used, listing the jurisdictional FSDO, or the use to be authorized under part 61.

(c) The approved maneuvers and procedures or tasks listed in the PTS, based on the qualification level of the device.

(d) Prepare a letter of notification to AFS-800 IAW paragraph 7.

(2) If the device is found to be unacceptable, perform the following:

(a) Notify AFS-800 with details of the evaluation concerning the continued or permissible use of the device; and

(b) Issue a letter of denial.

4. TASK OUTCOMES. Completion of this task results in one of the following actions:

A. Issuance of an LOA for the use of the training device at a specific level for specific use in an FAA-approved training program or under part 61 IAW 14 CFR § 61.4.

B. Issuance of a letter of denial and, if applicable, recommendations for the use of the training device at an alternate level.

5. FUTURE ACTIVITIES.

A. A re-issuance of the LOA.

B. A reevaluation of the training device.

FIGURE 34-1
SAMPLE LETTER OF AUTHORIZATION

FAA Letterhead
[*date*]:

[*applicant's name and address*]:

Dear [*applicant's name*]:

After an evaluation of [*make and model of training device*] by representatives of the Administrator, the Federal Aviation Administration (FAA) has determined that [*make, model, and serial number of training device*] contains sufficient features to permit its use under Title 14 of the Code of Federal Regulations (14 CFR) part 61 and/or 141 as follows:

NOTE 1: If formerly a conferred device now classified as Level 1, cite section 61. 4(b) as authority for continued use and limited *only* to that use, or as provided under existing regulations.

NOTE 2: Unless limited in use, as in the case of the Inverted-A-Device, the standard authorized use of these devices under parts 61 and 141 are as follows:

(1) Section 61.51 (g)(4), Logged instrument flight time (Optional);

(2) Section 61.57 (c)(1), Instrument experience;

(3) Section 61.57 (d), Instrument proficiency check;

(4) Section 61.65 (e)(2), Use of flight simulators or flight training devices;

(5) Section 61.129 (i)(1)(i), Permitted credit for use of a flight simulator or flight training device; and

(6) Section 61.159 (a)(3)(i), Permitted Use of a Flight Simulator or Flight Training Device;

(7) Section 141.41 (b), Flight training devices, as permitted in the appropriate Appendix to part 141 or as limited under section 61.4 (b).

THIS AUTHORIZATION IS CONTINGENT UPON:

The FAA's periodic evaluation of the device to ensure that it's ability to perform the above listed (tasks/maneuvers) has not deteriorated; and

The manufacturer/operator of the device continues to pursue qualification to a level or levels described in the current edition of Advisory Circular (AC) 120-45, Airplane Flight Training Device Qualification.

The authorization for use of this device, as stated above, is valid until modified or rescinded by the FAA and provided that an annual report regarding its status and continued use is submitted to the jurisdictional Flight Standards District Office.

Sincerely,

[*FSDO Manager's signature*]

FIGURE 34-2
SAMPLE LETTER OF AUTHORIZATION(LOA)
Flight Training Devices (FTD), Levels 2, 3 and 5

Date:

XYZ Airline Training Center, Inc.,
2100 North Airport Drive, Suite 210
Ravenswood, Illinois 61603

Dear:

Representatives of the _____Federal Aviation Administration's (FAA) Flight Standards District Office (FSDO) completed an evaluation of the _____ Serial Number_____Flight Training Device (FTD) identified herein. The Qualification Test Guide for this FTD is based on __(Reference Data Report ##)_____ approved by the Manager, National Simulator Program, on_____ . This FTD was evaluated to Level_____ standards as outlined in Advisory Circular (AC) 120-45A, Airplane Flight Training Device Qualification, and is approved for use by XYZ Airline Training Center, Inc., as outlined below:

PART 61.4(a) Qualification and Approval of Flight Training Devices

Training, testing, or checking of maneuvers, procedures, or crewmember functions listed in the appendices of the following Practical Test Standards for a Level_____FTD.

Commercial Pilot Airplane Practical Test in accordance with FAA-S-8081-12A, Practical Test Standards:
Exceptions:

NOTE: The use of Levels 2 and 3 is authorized only for airplanes not requiring a type rating.

Instrument Rating (Airplane) Practical Test in accordance with FAA-S8081-4C, Practical Test:
Exceptions: (none)

Airline Transport Pilot and Aircraft Type Rating(Airplane) Practical Test in accordance with FAA-S-8081-5C, Practical Test Standards:
Exceptions:

NOTE: The use of Levels 2 and 3 is authorized only for airplanes not requiring a type rating.

FIGURE 34-2

SAMPLE LETTER OF AUTHORIZATION(LOA)
Flight Training Devices (FTD), Levels 2, 3 and 5

Part 142.59 Flight Simulators and Flight Training Devices

Training, testing, or checking of maneuvers, procedures, or crewmember functions listed in the appendices of the following Practical Test Standards and approved in the Training Course Outline and Curriculum required by Part 142, Subpart B for a Level____FTD

Commercial Pilot Airplane Practical Test in accordance with FAA-S-8081-12A, Practical Test Standards:
Exceptions:

NOTE: The use of Levels 2 and 3 is authorized only for airplanes not requiring a type rating.

Instrument Rating (Airplane) Practical Test in accordance with FAA-S8081-4C, Practical Test:
Exceptions: (none)

Airline Transport Pilot and Aircraft Type Rating(Airplane) Practical Test in accordance with FAA-S-8081-5C, Practical Test Standards:
Exceptions:

NOTE: The use of Levels 2 and 3 is authorized only for airplanes not requiring a type rating.

This Authorization is Contingent upon the following:

1. Instruction in this device is given by an authorized instructor who has demonstrated competency in the operation and use of the device as authorized;

2. The FAA's periodic evaluation of this device to ensure that its ability to perform the approved Tasks and/or Maneuvers authorized has not deteriorated.

3. The manufacturer/operator maintains continuous qualification of the device in accordance with AC 120-45A, Airplane Flight Training Device Qualification.

4. Any modifications of this device will be made in accordance with AC 120-45A.

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CHAPTER 52. ISSUE A CERTIFICATE OF WAIVER FOR MOTION PICTURE AND TELEVISION FILMING

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE: 1230

2. OBJECTIVE. The objective of this task is to determine if an aircraft operator has developed an acceptable operations manual for use in motion picture and television filming production, and if the aircraft operator has developed safe operating procedures, guidelines, and criteria, if necessary, to operate below the altitudes required in Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.119(b) for aerobatic flight. Successful completion of this task results in the acceptance or non-acceptance of an operations manual, the issuance of a certificate of waiver, or the disapproval of an application.

3. GENERAL.

A. Purpose. Production of motion pictures and/or television projects may require aircraft to be used as camera platforms in an intentional maneuver involving an abrupt change in an aircraft's attitude not necessary for normal flight. A waiver of the requirements of 14 CFR § 91.119(b) and (c) is necessary when airplanes must be flown closer than 1,000 and/or 500 feet from persons or property. Helicopter operations are authorized under 14 CFR § 91.119(d). If filming sequences require an aircraft to be flown in aerobatic flight below 1,500 feet above ground level (AGL), a waiver of 14 CFR § 91.303(e) may also be required. If other waivers of 14 CFR §91.303 are needed, they may be requested for review on a case by case basis.

B. Provisions. Essential personnel may be filmed while on the exterior of, or entering or exiting an aircraft in flight:

(1) Airplanes that include traditional external activities such as wing walking, parachuting, air-to-air transfers, air-to-ground transfers, towing (banners or equipment), and other, previously demonstrated activities.

(2) Balloons that include rappelling, long-line operations, in-flight transfers, rope ladders, and other traditional, or previously demonstrated motion picture activities.

(3) Helicopter activities that include rappelling, long-line operations, external camera operators, and other traditional, or previously demonstrated motion picture activities.

(4) Helicopter operations which require the placement of personnel or equipment outside the normal flight envelope of the aircraft, which has not been certificated for standard operations by the manufacturer may constitute an external-load operation. The FAA does not provide Class A, B, C, or D certification for most of these activities and they would not be approved as external-load operations under 14 CFR part 133. Operators using these techniques will be required to demonstrate their ability to operate with these loads prior to being granted a waiver for motion picture production activities. An applicant may show competency if he or she has in his or her personal possession one of the following:

(a) A letter of competency or an appropriate logbook entry in accordance with 14 CFR § 133.37(a)(1)(2), or;

(b) FAA Form 8710-7, Statement of Acrobatic Competency card signed by an MPPA designated aerobatic competency evaluator (ACE). This card must be endorsed by the ACE for motion picture event external-load activities.

C. Aircraft.

(1) Restricted and Experimental Category Aircraft.

(a) Serving as a camera platform for motion picture and television filming is one of the purposes for which FAA issues a restricted category airworthiness certificate under 14 CFR § 21.25(b)(3).

(b) In order to be used in motion picture and television filming operations as the subject aircraft, the aircraft must have an airworthiness certificate issued in the appropriate category (i.e., experimental exhibition, restricted (if demonstrating its purpose, etc.)).

(2) Helicopters.

(a) Helicopter operations are generally conducted under 14 CFR § 91.119(d), which allow operations at less than the minimums prescribed in 14 CFR § 91.119(b) and (c).

(b) Abnormal low-level movie-making helicopter operations may create a hazard to persons or property on the surface. Therefore, Federal Aviation Administration (FAA) Form 7711-1, Certificate of Waiver or Authorization must be obtained for helicopter motion picture and television filming operations.

i. The waiver holder must develop a plan of activities for each filming event over a congested and densely populated area and submit it to the Flight Standards District Office (FSDO) having jurisdiction over the area of planned operations for approval.

ii. All flight operations must be conducted at an altitude and routing that will allow the helicopter, in an emergency, to be landed without hazard to the non-participating public or property on the surface.

(c) If helicopters are to be used for aerobatic purposes under the provisions of this waiver, refer to chapter 49, section 1, paragraph 1D.

D. Forms Used. Federal Aviation Administration Form 7711-2, Application for a Certificate of Waiver or Authorization (figure 52-1), is a multipurpose form used to apply for FAA Form 7711-1, Certificate of Waiver or Authorization (figure 52-2). Instructions for Completion of FAA Form 7711-2 are in figure 52-3. All items on the form may not be applicable to the application request.

E. Submission. FAA Form 7711-2, including a proposed Motion Picture and Television Operations Manual, should be submitted at least 45 days before actual filming begins. The completion and submission of FAA Form 7711-2 and a proposed operations manual is the sole responsibility of the applicant.

F. Approval or Disapproval. Applications for filming motion pictures and television projects are processed at the local FSDO. Within 30 days of receipt of the FAA Form 7711-2, an approved FAA Form 7711-1 or disapproval of the application must be issued by the district office. Upon approval, FAA Form 7711-2 and the acceptable operations manual becomes part of FAA Form 7711-1. The district office manager, or designated representative, shall sign the waiver upon approval.

G. Expiration Date. An FAA Form 7711-1 shall expire 24 calendar months from the date of issuance. A certificate of waiver may be reissued by submission of a properly prepared FAA Form 7711-2 and the applicant's previously accepted operations manual, if appropriate.

H. Motion Picture and Television Operations Manual. Operating and safety procedures must be incorporated in a Motion Picture and Operations Manual. The operations manual, once accepted, becomes a part of the waiver. The operations manual is the standard by which a certificate holder must conduct all operations pursuant to the certificate of waiver. The controls, procedures, and conditions set forth in the operations manual are the primary assurance that persons on the surface will not be jeopardized. This will be the basis for the issuance of the waiver. Therefore, failure to comply with the provisions of the operations manual shall be considered a violation of the terms of the waiver and may constitute justification for cancellation of the waiver.

I. Operations Manual Revisions. Inspectors should encourage operators to discuss manual revisions before they are submitted for acceptance. Revisions should not be distributed by the operator until acceptance by the FAA and returned to the operator with an indication of acceptance. If the revisions are not accepted, inspectors must notify the operator in writing within 10 days of receipt of the proposed revisions.

J. Special Provisions.

(1) The following statement must appear as a special provision: "The certificate holder must adhere to the Motion Picture and Television Operations Manual."

(2) The pilot-in-command (PIC) may remove and install specialty equipment authorized in accordance with (IAW) an exemption when issued for that purpose.

(3) Traditional seating for the PIC of various aircraft does not always lend itself to be the safest position from which to conduct a flight. The primary seat may not be the optimal location, depending on the location of the subject vehicle. This may be determined by the PIC.

(4) Additional provisions deemed appropriate to ensure safety of the operation should be prescribed by the FSDO (figure 52-4).

4. CONTENTS OF THE OPERATIONS MANUAL. The applicant must submit an original and one copy of the Motion Picture and Television Filming Operations Manual. The manual must include at least the following:

A. Company Organization.

(1) Business name, address, and telephone number of applicant.

(2) List of pilots and aircraft to be used during the filming. This may be impracticable for inclusion in the manual. However, the plan of activity must include a list of pilots, their certificate numbers and aircraft to be used.

(3) List of aircraft by make and model, N numbers may be included.

B. Distribution and Revision. This section should contain procedures for revising the operations manual to ensure that all manuals are kept current. Revisions for the accepted operations manual should be forwarded to the FSDO at least 15 days before the proposed effective date.

C. Persons Authorized. Title 14 CFR § 91.119(c) is waived only with respect to those persons, vehicles, and structures directly involved in the performance of the actual filming. The certificate holder's manual shall include procedures to ensure that no persons are allowed within 500 feet of the area except those consenting to be involved and necessary for the filming production. This provision may be reduced to no less than 200 feet if an equivalent level of safety can be achieved. (See figure 52-5.)

D. Area of Operations. There will be a variety of operational needs, depending upon the activities of the applicant. Certain companies may confine their activities to a local area, while other operators may conduct activities throughout the entire U.S., territories and possessions. The manual shall define the area authorized by the certificate of waiver. While the waiver may be issued by the geographically responsible FSDO, the operator should coordinate operations and intent with the field office (FSDO) responsible. This information should be listed as one of the special provisions of Form 7711-1.

E. Plan of Activities. The manual must include procedures for the operator to submit, 3 days prior to scheduled filming, a written plan of activities to the local FSDO having jurisdiction over the area of proposed filming. The plan of activities must include at least the following:

(1) dates and times for all flights;

(2) name and phone number of person responsible for the filming production event;

(3) make, model and serial or N-number of aircraft to be used and type of airworthiness certificate, including category;

(4) name and certificate number of pilots involved in the filming production event;

(5) a statement that the waiver holder has obtained permission from property owners and/or local officials to conduct the filming production event;

(6) signature of waiver holder or representative; and

(7) a general outline, or summary, of the flight activity, to include maps or diagrams of the specific filming location, if necessary.

F. Permission to Operate. The motion picture and television operations manual shall specify requirements and procedures for the operator to obtain permission from property owners and/or local officials (e.g., police, sheriff, fire departments) as appropriate for the conduct of all operations when using the waiver.

G. Security. The applicant shall specify the method of security that will be provided to exclude all persons from the location not directly involved with the operation. In the interest of safety, provisions shall be made to stop activities when unauthorized persons, vehicles, or aircraft enter the operations area, or for any other reason.

H. Briefing of Pilot/Production Personnel. Procedures shall be included to brief personnel of the risks involved, emergency procedures, and safeguards to be followed during the filming production event. Personnel will also be briefed on any additional provisions that may be issued by the local FSDO, including the location of boundaries or any other time limits.

I. Certification/Airworthiness. The aircraft may be certificated in any category, including experimental, provided the requirements of 14 CFR §§ 91.7 and

91.203 are met. Procedures shall be included to ensure that aircraft inspections will be IAW the applicable parts of part 43, 91, or the assigned operating limitations.

J. Pilot Personnel - Minimum Requirements. The operator shall establish and specify the minimum pilot requirements. Minimum requirements should meet or exceed the following:

(1) a current U.S. commercial pilot certificate with ratings appropriate to the category and class aircraft to be used under the terms of the waiver;

(2) at least 500 hours as PIC logged;

(3) a minimum of 100 hours in the category and class of aircraft to be used;

(4) a minimum of 5 hours in the make and model aircraft to be used under the waiver; and

(5) in the event that the 1500-foot minimum standard contained in 14 CFR § 91.303(e) is to be waived, the pilot performing aerobatic maneuvers must hold FAA Form 8710-7, Statement of Acrobatic Competency, for the operations to be performed.

(6) In the event the operation to be conducted contains elements of an external-load operation, whether fixed or rotary wing operations, pilots utilized in the operation shall be qualified for the operation. This qualification may be obtained through a test of knowledge (which may be oral or written, at the option of the applicant) and skill. The tests shall be given by an FAA inspector or another company pilot who is qualified to carry loads externally under the waiver or part 133. Record keeping for these tests should be similar to part 133 requirements which cover the following subjects:

(a) Steps to be taken before starting operations, including a survey of the flight area;

(b) Proper method of loading, rigging, or attaching the external-load;

(c) Aircraft performance capabilities, under previously demonstrated and traditional motion picture operating procedures and the manufactures flight manual and limitations;

(d) Proper instructions of flight and ground crew personnel; and

(e) Appropriate rotor craft - load combination flight manual or aircraft flight manual as appropriate.

K. Communications. The operations manual must contain procedures to provide communications capability with all participants during the actual operation and filming. The applicant can use oral, visual, or radio communications as long as it keeps the participants continuously apprised of the current status of the operation.

L. Accident Notification. The operations manual must contain procedures for notification and reporting of accidents.

M. Aerobatic Competency. In order for any pilot to perform aerobatic maneuvers at filming events authorized by a Certificate of Waiver, the pilot must have in his or her possession an FAA Form 8710-7, Statement of Acrobatic Competency (figure 53-1). An experienced aerobatic inspector may issue FAA Form 8710-7 for motion picture and television filming. The inspector or experienced and qualified aerobatic industry evaluators may be designated by the FSDO to conduct aerobatic evaluations and make recommendations to the FSDO for issuance of FAA Form 8710-7. The inspector will issue the card with the following limitation:

VALID FOR MOTION PICTURE AND TELEVISION FILMING ONLY.

NOTE: The Statement of Acrobatic Competency may be issued for up to 24 calendar months.

(1) It is generally agreed that the level of safety of any segment of the industry is critically dependent upon that industry's assuming responsibility for itself and its safety programs. In this instance, the motion picture/television industry was very proactive in its procedures that would reflect negatively on general aviation.

(2) Industry evaluators are people who are credible and dedicated to fulfilling their duties to conduct peer review, counsel, and make appropriate recommendations to the FAA.

NOTE: For all airshow and/or aerobatic competency performances the procedures outlined in chapter 31, Issue/Renew/Rescind a Statement of Acrobatic Competency, will apply.

(3) If any questions should arise with regard to the issuance of a certificate of waiver, principal inspectors may request guidance from a motion picture and television filming specialist at the Van Nuys, CA FSDO at (818) 904-6291.

5. REVIEW FAA FORM 7711-2. Pertinent items are discussed below for purposes of clarity and uniformity. The application should be reviewed upon receipt for obvious discrepancies. The information submitted by the applicant on FAA Form 7711-2 **must not** be altered by the reviewing office.

A. Items 1 and 2. If the applicant is a representative of an organization, the organization's name should appear in item 1. The name of the individual and his or her position or authority to represent the organization (e.g., the responsible person) should appear in item 2. If the applicant is not representing others, the term, N/A, should be entered in item 1 and the applicant's name entered in item 2.

B. Item 4. In many instances the applicant does not know or is not sure which sections of 14 CFR are involved. A conference with the applicant before acceptance of the application may be necessary.

C. Item 5. It is sufficient for the applicant to use the term, motion picture and/or television filming, to describe the type of operation.

D. Item 6. The geographical area of operations desired. A detailed description of any city, town, county, and/or state over which filming production event operations will be conducted and the minimum altitudes essential to accomplish the operation should be included in the plan of activities.

E. Item 7. The applicant should list the beginning date and hour and ending date and hour for the operation in this item. The dates requested must not exceed 24 calendar months. In cases involving one-time operations where an alternate date has not been indicated, the inspector should advise the applicant to request an alternate date in order to save time and unnecessary paperwork.

F. Item 8. At the time the application for a waiver is submitted, the applicant may not know the names of the pilots or the aircraft to be used in a particular operation. The application may be accepted with a notation in item 8 that a list will be provided with the plan of activities.

G. Items 9 through 14 may be included in either the motion picture and television general operations manual or the operator's plan of activities. The items listed are not required for inclusion in the Form 7711-2.

(1) The FAA's concerns are measures that need to be taken to guarantee it will be a safe operation. Members of the non-participating public must be protected from hazards. The participating persons must be protected from undue hazard.

(2) While the applicant assumes responsibility for the terms of the waiver, he or she may be inexperienced and not have the operational expertise to ensure compliance with the specified conditions of the waiver. Under these circumstances, the applicant should be advised that as a condition for the issuance of the waiver, an experienced pilot with the necessary background in motion picture/television production must be designated by the sponsoring organization or individual to ensure operational safety for the filming production event.

H. Item 11. Although it may be desirable, there is no specific requirement for the use of uniformed police or security guards. The need for special policing depends upon several factors.

(1) If fencing is used for crowd control, there may be little need for special crowd-control personnel. On the other hand, if the sponsor intends merely to cordon off the designated areas with rope, it might be necessary to have special crowd-control personnel.

(2) With respect to crowd-control, it must be remembered that it is not the FAA's responsibility to control the crowd nor to decide who can serve to police the filming production event.

(3) In every case, the applicant should be advised that it is his or her responsibility to ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorized persons or vehicles enter the airspace where maneuvers are being performed during the filming production event, efforts must be made to remove them. All parties involved in the production and the inspector shall use good judgment when determining whether it is necessary to halt a filming production event to protect persons on the ground.

I. Item 12. Emergency facilities have also caused problems for production companies. As discussed previously, the application form serves as an all-purpose form, and therefore, contains items that may or may not be appropriate to emergency facilities. Some applications have been denied because the boxes for physician, ambulance, and fire truck were not filled in. Every filming production event sponsor should be encouraged to provide emergency medical service even though this service is not normally necessary. A physician or a rescue squad, paramedics, or emergency

medical technicians may be sufficient. Normally, the following rules of thumb are adequate.

(1) Physician. Except for events that are a great distance (in a ground vehicle) from a hospital or medical clinic, an emergency rescue squad, paramedics, emergency medical technicians, or a first-aid station can be substituted for a physician.

(2) Ambulance. If an emergency rescue squad is provided, an ambulance should also be provided. If there is a physician in attendance, any vehicle acceptable to the physician for emergency transportation is sufficient. In fact, many communities rely on a sheriff's or local law enforcement officer's vehicle as their only means of ambulance service. It would be improper to prohibit use of a similar vehicle to serve as an ambulance for the event.

(3) Fire Truck. For the most part, the only reason for having a fire truck at a filming production event is for the performers' benefit, not the spectators'. If the performers are willing to accept a pickup truck with hand-held fire extinguishers, the FAA should not demand that the sponsor provide a bona fide fire truck with trained firemen.

(4) Crash Wagon. Many locations where events are conducted do not have crash wagons available. If they are not available, the FAA should not require a sponsor to obtain one from a facility that might be hundreds of miles away. Again, crash wagons serve the performers, not the public.

(5) Other. A sponsor seldom needs to fill in this block. The following is an example of how the **other** block might prove useful. In one filming production event, the sponsor had a helicopter and pilot continually ready for emergency transportation of spectators or performers who might be injured or who become ill during the filming production event. Additionally, a military-trained firefighter and medic was standing by the helicopter with extinguishers in case one of the aircraft had an accident anywhere in the operating area. In this particular case, by describing this **other** emergency facility, the applicant could have been relieved of having to show anything in the preceding blocks.

J. Item 13. Air traffic control (ATC) for filming production events can be handled in many ways. Naturally, if the airport is served by a control tower, communications problems may be negligible. Radio communications or prearranged ground-to-air signals can handle traffic control.

(1) Even if every aircraft in the event is equipped with a two-way radio, a ground-to-air recall signal provision should be provided and described in the application.

(2) If an airport, that is the site of a filming production event, is served by a scheduled air carrier, arrangements must be made for the arrival and departure of such aircraft. Generally, it is adequate to schedule a break in the activities to allow for scheduled arrivals and departures.

K. Item 14. The FAA must see a schedule of events in order to evaluate the application. For the purpose of reviewing the application, the schedule does not need to be detailed. It should contain at least a general description of the types of events for the filming production event and their sequence during the filming production event.

(1) The applicant must specify a date before the filming production event when he or she will provide a schedule of events. The schedule of events must list the identification of the aircraft and the performers in the sequence of their appearance. This list becomes a part of the official waiver package. At the filming production event the scheduled order of events on the waiver may change because of weather, mechanical problems, etc. Such changes must be coordinated with the FAA inspector-in-charge.

(2) Any maneuvers added to the schedule of events will require FAA approval and should be submitted to the FAA at the earliest opportunity. Cancellation of events do not require advance notice.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of part 91 and FAA policies and qualification as an aviation safety inspector (ASI) (operations).

B. Coordination. This task may require coordination with the airworthiness unit within the district office, other district offices, regional offices, headquarters (AFS-800), or appropriate air traffic facilities.

2. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- Parts 1, 21, 43, 61, 91, etc.
- PTRS Procedures Manual (PPM)

B. Forms.

- FAA Form 7711-1, Certificate of Waiver or Authorization (figure 52-2)
- FAA Form 7711-2, Application for a Certificate of Waiver or Authorization (figure 52-1)
- FAA Form 8000-36, Program Tracking and Reporting Subsystem Data Sheet

C. Job Aids.

- Sample letters and figures

3. PROCEDURES.

A. Issue/Renew/Rescind a Statement of Acrobatic Competency Card for Motion Picture/Television Filming. An applicant for a Statement of Acrobatic Competency card should contact the geographically located FSDO for a list of authorized evaluators.

(1) Schedule Evaluation. The applicant contacts an appropriate evaluator and schedules the time and location of the examination and demonstration. Form 8710-1, Airman Certificate and/or Rating Application, must be appropriately completed by the applicant.

(2) Conduct Evaluation. If the applicant does not meet the applicable standards, inform the operator of the reasons for the unsatisfactory performance and reschedule the evaluation.

(3) Issue Certificate. Upon satisfactory completion of the evaluation, the industry evaluator will submit the 8710-1 application with a cover letter to the FSDO closest to the applicant's mailing address. The cover letter will also include a draft FAA Form 8710.7 card for the applicant. As determined from the draft card, a FAA Inspector will issue FAA Form 8710-7, Statement of Acrobatic Competency. The limitation section must state:

VALID FOR MOTION PICTURE AND TELEVISION FILMING ONLY.

(a) The evaluator will list the authorized maneuvers, altitude limitations, and approved aircraft on the reverse side of the draft FAA Form 8710-7 as determined from the evaluation. More than one 8710-7 card may be required to list all approved aircraft;

(b) The FAA inspector will sign and date FAA Form 8710-7 which may be issued for a period of up to 24 months.

(c) The FAA inspector will make copies of FAA Forms 8710-1 and 8710-7 with maneuvering limitations for the district office files. The industry evaluator will make copies of FAA Forms 8710-1 and 8710-7 with maneuvers limitations for the evaluator files, and submit copies of all forms to the FSDO. The industry evaluator will also prepare and submit a PTRS form to the FSDO.

(d) The FAA Inspector will present the original FAA Form 8710-7 to the applicant. Do not forward a copy to AFS-760, Airman Certification Branch and;

(e) The inspector will make the appropriate PTRS entry.

NOTE: Original copies of all evaluation documentation will be retained by the evaluator.

(4) Reissuance or Renewal. An evaluation by an inspector or evaluator is required for reissuance or renewal of a Statement of Acrobatic Competency.

B. Task outcomes. Completion of this task results in issuance, renewal, or denial (figure 53-6) of FAA Form 8710-7.

4. FUTURE ACTIVITIES.

A. The inspector could take part in an investigation as a result of an accident, incident, or violation of the regulations, and be called upon to rescind FAA Form 8710-7, or require re-evaluation.

B. FAA Form 8710-7 may be rescinded based on the facts, conditions and circumstances of an accident or incident that raises doubt about the pilot's aerobatic competency.

5. PROCEDURES.

A. Determine if FAA Form 7711-2 is Required. Refer to section 1, paragraph 2.

(1) If an FAA Form 7711-1 is not required, terminate the task.

(2) If an FAA Form 7711-1 is required:

(a) Provide the applicant with a copy of FAA Form 7711-2 (figure 52-1), Instructions for Completion of FAA Form 7711-2 (figure 52-3), and part 91 Motion Picture and Television Flight Operations Manual Development Guide (figure 52-4).

(b) Advise the applicant to complete items 1 through 8 and 15 on FAA Form 7711-2.

(c) Advise the applicant that the application must be submitted in duplicate (the original and one copy) to the FSDO at least 45 days before the filming production event.

(3) If an FAA Form 7711-1 is required and the applicant is applying for a waiver of 14 CFR § 91.303.

NOTE: Other than 14 CFR § 91.303(e), applications for § 91.303(b) through (d) may be requested on other than a 24 month basis (one time issue). Items 9 through 14 will be completed, this is a separate issue to-be-determined (TBD).

(a) Advise the applicant that items 1 through 15 on FAA Form 7711-2 must be completed, (for a short term 14 CFR § 91.303(b) thorough (d) waiver for a period less than 24 months).

(b) Advise the applicant that the application must be submitted in duplicate (the original and one copy) to the FSDO at least 45 days before the filming production event.

(c) Advise the applicant that a Motion Picture and Television Operations Manual must be prepared and submitted in duplicate (the original and one copy) to the FSDO for review at least 45 days before the planned filming production event.

B. Open PTRS. Make appropriate PTRS entries.

C. Receipt of FAA Form 7711-2 and Motion Picture and Television Operations Manual, if Appropriate. Using the information provided by the applicant and the background in section 1, review FAA Form 7711-2 for all pertinent information for the proposed filming production event. Accept strikeovers that are minor in nature and initialed by the applicant. Items 9 through 14 apply if the applicant has requested a waiver of 14 CFR § 91.303(b) through (d), and to airshow and air race waiver requests only.

(1) Items 1 and 2, Name of Organization/Name of Responsible Person. Ensure that the applicant has indicated the name of the organization or individual applying and the name of a person responsible for matters concerning the application.

(2) Item 3, Permanent Mailing Address. Ensure that the applicant has indicated the permanent mailing address of the organization or individual named in Item 1.

(3) Item 4, 14 CFR Sections to be Waived. Ensure that the applicant has listed all sections of 14 CFR that need to be waived with regard to the filming production event.

(4) Item 5, Description of Operations. Ensure that the applicant has indicated the type of motion picture and/or television filming production event to be conducted.

(5) Item 6, Area of Operations.

(a) Ensure that the applicant has listed the specific locations and altitudes of the proposed filming production event.

(b) Ensure that the area of operation is within the jurisdiction of the district office.

(6) Item 7, Time Period.

(a) Ensure that a beginning date and hour and an ending date and hour for the filming production event has been indicated.

(b) Ensure that the time period indicated does not exceed 24 calendar months.

(7) Item 8, Aircraft and Pilots. Check for aircraft make and model, pilot names, certificate numbers and full home addresses. Item 8 may be accepted with a statement, "A list containing aircraft and pilot information will be furnished on [*applicant enters a specific date*]."

(8) Items 9 and 10, Sponsorship. Ensure that the applicant has indicated the sponsor (organization or individual) of the filming production event and the sponsor's address.

(9) Item 11, Policing. Ensure that the applicant has described provisions for policing the filming production event.

(10) Item 12, Emergency Facilities. Ensure that the applicant marked all items that will be available at the time and place of the event.

(11) Item 13, Air Traffic Control. Ensure that the applicant has described the method of controlling air traffic, including the arrival and departure of aircraft.

(12) Item 14, Schedule of Events. Ensure that the applicant has listed the dates and times of all scheduled filming events.

(13) Item 15, Certification. Ensure that the applicant has signed and dated FAA Form 7711-2 and each page of the application.

(14) If FAA Form 7711-2 has not been completed:

(a) List the reasons for disapproval in the "Remarks" section of FAA Form 7711-2.

(b) Prepare a letter of disapproval of application (figure 52-6) with a suspense date for submission of a corrected FAA Form 7711-2.

(c) Retain a copy of the application for future comparison.

(d) Return the application, flight operations manual, if appropriate, and the letter of disapproval to the applicant.

(e) Make appropriate PTRS entries.

(15) If FAA Form 7711-2 has been completed:

(a) Prepare FAA Form 7711-1 if a flight operations manual is not required.

(b) If a flight operations manual is required and has been submitted, review the flight operations manual.

D. Review Operations Manual. Ensure that the operations manual contains the items discussed in section 1, paragraph 4.

E. Unsatisfactory Flight Operations Manual. If the manual is unsatisfactory:

(1) Contact the applicant and explain areas of the flight operations manual that need to be corrected.

(2) Prepare a letter of non-acceptance of the manual (figure 52-7) with a suspense date for submission of the corrected flight operations manual.

(3) Mark the "Disapproved" block of FAA Form 7711-2, list reasons for the disapproval in the "Remarks" section of FAA Form 7711-2, and sign and date in the action block of FAA Form 7711-2.

(4) Retain a copy of the flight operations manual for future comparison.

(5) Return the application, the flight operations manual, and the letter of non-acceptance to the applicant.

F. Satisfactory Flight Operations Manual. If the manual is satisfactory:

(1) Mark the "Approved" block on FAA Form 7711-2, and sign and date in the action block of FAA Form 7711-2.

(2) Prepare a letter of acceptance of a flight operations manual (figure 52-8).

(3) Continue with the task.

G. Prepare FAA Form 7711-1.

(1) Fill in the inspector portion of FAA Form 7711-1.

(2) Develop any special provisions that are not covered in the applicant's flight operations manual.

(3) If 14 CFR § 91.303 is to be waived, refer to chapter 49, section 1, paragraph 17 and 19A through D for additional provisions that may be required.

(4) Submit FAA Form 7711-1 to the district office manager, or designated representative, for his or her signature. The designated representative may be no lower then the operations unit supervisor.

(5) Prepare a reminder notice/letter (figure 52-9) to the waiver holder reminding him or her that a plan of activities must be submitted and accepted

before each filming production event, including any special provisions.

H. District Office File.

(1) Prepare a district office file on the applicant that includes, but is not limited to, a copy of the following documents:

(a) FAA Form 7711-1 and the special provisions;

(b) FAA Form 7711-2;

(c) flight operations manual;

(d) notice/letter of disapproval of application (FAA Form 7711-2);

(e) notice/letter of non-acceptance of the flight operations manual;

(f) notice/letter of acceptance of the flight operations manual;

(g) notice/letter of reminder; and

(h) any other documents of correspondence.

(2) Send the original of the following documents to the applicant:

(a) FAA Form 7711-1;

(b) FAA Form 7711-2;

(c) accepted Motion Picture and Television Flight Operations Manual;

(d) notice/letter of acceptance of the flight operations manual; and

(e) notice/letter of reminder.

I. Close PTRS. Make appropriate PTRS entries.

J. Vital Information Subsystem (VIS). Establish a part 91 operator VIS record, if appropriate.

6. TASK OUTCOMES. Completion of this task results in one or more of the following:

A. Issuance of a certificate of waiver.

B. Disapproval of an application.

C. A letter of non-acceptance of the flight operations manual.

D. An accepted flight operations manual.

E. Letter of acceptance of the flight operations manual.

F. Letter of reminder to submit a plan of activities.

G. Part 91 VIS record.

7. FUTURE ACTIVITIES.

A. Reissue a certificate of waiver.

B. Cancellation of a certificate of waiver.

C. Review proposed revisions to the flight operations manual.

D. Review the operator's plan of activities.

E. Surveillance of any operations approved by the certificate of waiver.

F. Possible enforcement investigation.

FIGURE 52-1
FAA FORM 7711-2, APPLICATION FOR A CERTIFICATE OF WAIVER OR AUTHORIZATION

No certificate may be issued unless a completed application form has been received (14 C.F.R. 91, 101, and 105).

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION

Form Approved: O.M.B. No. 2120-0027

APPLICANTS - DO NOT USE THESE SPACES

Region	Date

Action
☐ Approved ☐ Disapproved - *Explain under "Remarks"*

Signature of authorized FAA representative

INSTRUCTIONS

Submit this application in triplicate (3) to any FAA Flight Standards district office.

Applicants requesting a Certificate of Waiver or Authorization for an aviation event must complete all the applicable items on this form and attach a properly marked 7.5 series Topographic Quadrangle Map(s), published by the U.S. Geological Survey (scale 1:24,000), of the proposed operating area. The map(s) must include scale depictions of the flightlines, showlines, race courses, and the location of the air event control point, Police dispatch, ambulance, and fire fighting equipment. The applicant may also wish to submit photographs and scale diagrams as supplemental material to assist in the FAA's evaluation of a particular site. Application for a Certificate of Waiver or Authorization must be submit- ted 45 days prior to the requested date of the event.

Applicants requesting a Certificate of Waiver or Authorization for activities other than an aviation event will complete items 1 through 8 only and the certification, item 15, on the reverse.

1. Name of organization	2. Name of responsible person
Universal Studios, Inc.	**Louis B. Mayer III**

3. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.
	1 Universal Way	**Hollywood**	**CA 91111**	**(917) 555-4321**

4. FAR section and number to be waived
(List all 14 CFR to be waived for the filming event.)

5. Detailed description of proposed operation *(Attach supplement if needed)*
(The applicant must describe the filming event in as much detail as possible. The applicant may attach separate sheets if necessary.)

6. Area of operation *(Location, altitudes, etc.)*
(The applicant must indicate the specific locations, altitudes, etc. The applicant may attach a map, chart, or other depiction.)

7a. Beginning *(Date and hour)*	b. Ending *(Date and hour)*
(Self-explanatory)	**(Self-explanatory)**

8. Aircraft make and model (a)	Pilot's Name (b)	Certificate number and rating (c)	Home address *(Street, City, State)* (d)
(The applicant may submit this information at a later date if unknown at the time of application; however, the inspector can not approve the application until receiving the information.)			

FAA Form 7711-2 (6-86) Supersedes Previous Edition AFS Electronic Forms System - JetForm FormFlow - 12/1998

FIGURE 52-1 - Contiuned
FAA FORM 7711-2, APPLICATION FOR A CERTIFICATE OF WAIVER OR AUTHORIZATION

▶ *ITEMS 9 THROUGH 14 TO BE FILLED OUT FOR AIR SHOW/AIR RACE WAIVER REQUESTS ONLY.*

9. The air event will be sponsored by:
(Self-explanatory)

10. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.
	(Self-explanatory)			

11. Policing *(Describe provisions to be made for policing the event.)*
(The applicant must furnish a detailed description of how the area will be policed for expected and unexpected crowds.)

12. Emergency facilities *(Mark all that will be available at time and place of air event.)*
(The applicant must check all that apply.)

☐ Physician ☐ Fire truck ☐ Other - *Specify* _____
☐ Ambulance ☐ Crash wagon

13. Air Traffic control *(Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft.)*
(The applicant must describe the methods of radio communication, if required, and/or any prearranged ground-to-air signals. If used, the applicant must describe the recall signal.)

14. Schedule of Events *(include arrival and departure of scheduled aircraft and other periods the airport may be open.)*

Hour (a)	Date (b)	Event (c)
		(The applicant should list the flight operation activities in the sequence in which they will occur during filming.)

If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.

Please Read > The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation.

15. Certification - I CERTIFY that the foregoing statements are true.

Date	Signature of Applicant
	(The applicant must date and sign the application.)

Remarks

FAA Form 7711-2 (6-86) Supersedes Previous Edition AFS Electronic Forms System - JetForm FormFlow - 12/1998

FIGURE 52-2
FAA FORM 7711-1, CERTIFICATE OF WAIVER OR AUTHORIZATION

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO
Universal Studios, Inc.

ADDRESS
1 Universal Way, Hollywood, CA 91111

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

(Indicate in detail all the flight operations authorized for the filming production event. Attach on a separate sheet of paper if necessary.)

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE
(List all 14 CFR sections that were waived.)

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE.---This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

"See Attached" ☐

Special Provisions Nos. 1 to 23 inclusive, are set forth on the reverse side hereof.

This certificate is effective from **(Beginning date/time)** to **(Ending date/time)**, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

(Self-explanatory)
(Region)

Signed by the district office manager but can be delegated no lower than the operations unit supervisor.
(Signature)

(Enter the date the waiver was signed.)
(Date)

(Title)

FAA Form 7711-1 (7-74) AFS Electronic Forms System - JetForm FormFlow - 12/1998

FIGURE 52-3
INSTRUCTIONS FOR COMPLETION OF FAA FORM 7711-2

1. PREPARING FAA FORM 7711-2. Items from FAA Form 7711-2 are discussed below for purposes of clarity and uniformity of its use.

a. Items 1 and 2, Name of Organization/Name of Responsible Person. If you are a representative of an organization, then the organization's name should appear in Item 1. Your name and title or position, as the organization's representative, for application purposes should appear in Item 2. If you are not representing an organization, the term "N/A" should be entered in Item 1 and your name in Item 2.

b. Item 3, Permanent Mailing Address. Self-explanatory.

c. Item 4, FAR Section and Number to be Waived. If you are unsure which sections of the FAR need to be waived, contact the FSDO for guidance.

d. Item 5, Detailed Description of Proposed Operations. It is sufficient to use the term "motion picture and/or television filming" to describe the type of operation. Additional detailed information on the type of operation to be conducted should be included.

e. Item 6, Area of Operation. A detailed description of any city, town, county, and/or state over which filming operations will be conducted and the minimum altitudes essential to accomplish the operation should be included in this item.

f. Item 7, Time Period. List the beginning dates and hours and ending dates and hours for the proposed filming operation. The maximum time period for operations is 24 calendar months (i.e., June 12, 1994 to June 30, 1996.) The application should be submitted to the FSDO at least 5 days before the beginning date of the operation. For a one-time operation, consideration should be given to alternate dates. A request for alternate dates may prevent a delay and/or unnecessary paperwork. These alternate dates should be included in this item.

g. Item 8, Aircraft Make and Model. List the names of all pilots, their certificate numbers and ratings, and their full home address and all aircraft by make and model to be used in the operation. If the type of aircraft and/or the names of the pilots are not known at the time the application is submitted, the FAA will accept the application with the statement, "A list containing aircraft and/or pilot information will be furnished on [insert date.]"

h. Item 9, Sponsorship.

i. Item 10, Permanent Mailing Address of Sponsor.

j. Item 11, Policing. Furnish a detailed explanation of how crowd control will be handled.

k. Item 12, Emergency Facilities. Place an "X" in the appropriate boxes. (If there are any questions concerning this item, please contact the FSDO.)

l. Item 13, Air Traffic Control. Describe the method or methods of radio communication frequencies and/or the prearranged ground-to-air signals to be used during the flight operations. A description of the ground-to-air recall signal must also be included.

m. Item 14, Schedule of Events. List all flight activities planned during the course of the operation in the sequence of occurrence.

n. Item 15, Certification. As the applicant or an organization's representative, you must sign in this block and on each page of the application.

FIGURE 52-4
SAMPLE MOVIE MANUAL SPECIAL PROVISIONS

The certificate holder must adhere to the Motion Picture and Television Flight Operations Manual. The following special provisions are provided for reference only and may be selected and/or modified as determined by the issuing FSDO.

1. The controls, procedures, and conditions set forth in the (insert name of company) Motion Picture and Television Operations Manual are the primary assurance that persons on the surface will not be jeopardized. This is the basis for issuance of the waiver. Therefore, failure to comply with the provisions of this manual will be considered a violation of the terms of the waiver and may constitute justification for cancellation of the waiver.
2. Aircraft and pilots used under the authorization of this waiver will be only those specified in the (insert name of company) Motion Picture and Television Operations Manual and associated plan of activities. Each pilot's name, and certificate number shall appear on each plan of activity.
3. All civil aircraft and pilots participating in the activity shall be available for FAA inspections before the scheduled event.
4. The FAA has the authority to cancel or delay some or all participants or events if, in its opinion, the safety of persons or property on the ground or in the air is in jeopardy, or there is a contravention of the terms of the waiver.
5. Authority to deviate from the regulations is limited to the specific regulations shown on the certificate of Waiver or Authorization.
6. All flight operations conducted under the authorization of this waiver will be performed in accordance with section 91.155, basic VFR weather minimums.
7. Aircraft may not be flown along a path that would require excessive maneuvering to avoid persons on the surface in the event of an emergency.
8. The holder of this Manual shall ensure that each pilot in command conducting operations authorized under this certificate understands the conditions of issuance, and that it constitutes a waiver of (insert applicable regulations (e.g., sections 91.119(b) and (c), 91.303(e), and 91.515)). It does not constitute a waiver of any state law or local ordinance.
9. Section 91.119(c) is waived only with respect to persons, vehicles and structures directly involved in the performance of the actual filming. Flight operations closer than 500 feet or over flight of a group of non-essential persons at less than 1,000 feet AGL are prohibited.
10. Rotorcraft takeoff and landing areas must be protected in a manner that will prevent unauthorized persons from entering the helipad area. The pads must be located so the aircraft will not pass over non-essential personnel during takeoff and landing.
11. In the event of an accident considered to be the result of an event deficiency or procedure, flight operations will be canceled until the deficiency has been corrected and the correction accepted by the FAA District Office responsible for the geographic area in which the activity occurred.
12. The holder of the waiver shall ensure that the persons involved in the flight operations are thoroughly briefed on special procedures, communications, emergency procedures and on the provisions of the waiver before beginning the activities. This requirement applies to all persons within 500 feet of the aircraft during waived activity. No person may participate in any event unless that person has received a briefing on the provisions of the waiver.
13. The holder of the (insert name of company) Motion Picture and Television Operations Manual shall maintain primary responsibility for safeguarding persons and property on the surface.
14. The certificate holder must submit three days prior to scheduled filming, a written plan of activities to the FSDO having jurisdiction over the area of proposed filming. **The three day notification may be waived with the concurrence of the FSDO. Justification of the exception to the three day requirement is required.**
15. Section 91.303 is not included in the sections waived by this certificate of waiver. Any aerobatics conducted under the authority of this Motion Picture and Television Manual will require a waiver of section 91.303, and any pilot used must have in his/her possession a current FAA Form 8710-7, Statement of Acrobatic Compentency representing demonstrated ability.
16. Aircraft operated under the authorization of this waiver will have on board an airworthiness certificate appropriate for the operations being conducted.
17. All flight operations conducted under the authorization of this waiver will be performed in accordance with 14 CFR § 91.155, Basic VFR Weather Minimums, except as provided in the Waiver Holder's Motion Picture and Television Operations Manual, Special Provisions Aerobatics.

Revision # (if appropriate)

___ FSDO Movie Manual Special Provisions

(enter date of issue)

FIGURE 52-5
MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATORS

A. Qualifications. Persons designated as Motion Picture and Television Filming Aerobatic Evaluators should meet the following minimum qualifications:

1. Be at least 21 years old;

2. Have a good record as a pilot in regard to accidents, incidents and violations;

3. Have a reputation for integrity and dependability in the industry and the community;

4. Have a history of cooperation with the FAA;

5. Evaluator candidates need not have a residence within the designating Flight Standards District Office (FSDO) geographical area of jurisdiction; however, an evaluator candidate must be able to provide evaluating service in the FSDO's area in order to be considered for authorization.

6. Each evaluator candidate selected for authorization by the FSDO must pass a practical evaluation by a FAA inspector before and LOA is issued.

B. Letter of Authorization. Evaluator authorizations conferred by the Letter of Authorization (LOA) will expire on the last day of the calendar month two years following the month of authorization.

1. Evaluator candidates will contact the jurisdictional FSDO;

2. Evaluators must demonstrate knowledge and skill appropriate to the authorizations to be renewed by the satisfactory completion of a demonstration of competency. (See Sample Ground and Air Evaluation Standard and Checklist, included in figure 52-5.)

3. Five filming evaluations each year are generally required for renewal of evaluator authorization. If there are legitimate reasons why an evaluator has been unable to accomplish that amount of activity, the FSDO manager may modify the requirement to the extent justified by the extenuating circumstances and approve the renewal;

4. At the discretion of the FSDO, a practical test of the evaluator, appropriate to the authorization held, satisfactorily completed within 3 calendar months before the expiration of the LOA, may be used to satisfy this requirement. (See Sample Ground and Air Evaluation Standard and Checklist, included in figure 52-5.)

The Aerobatic Evaluator is the key individual in maintaining the integrity of the program. For this reason the Evaluator is selected from those who have demonstrated and maintained the highest aeronautical, professional and personal standards.

The qualities listed must be met prior to selection as an evaluator and maintained throughout their tenure as an evaluator.

C. Qualities for Selection.

1. The evaluator shall possess the judgement required to evaluate the applicants flying qualities and mental preparation for the proposed evaluation;

2. The evaluator shall possess the maturity to properly evaluate the applicant to a level of competency and safety;

3. The evaluator shall enjoy the respect of his/her peers and the respect and confidence of the Federal Aviation Administration (FAA).

4. The evaluator shall abide by the following standards of ethics:

Figure 52-5
MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATORS - Continued

A. Any conflict of interest or the perception of any conflict of interest must be avoided at all times;

B. All evaluations shall be accomplished in a manner that is fair and equitable to all applicants;

C. The evaluator shall conduct himself/herself in a manner that reflects on the professionalism and integrity of the Motion Picture and Television Filming industry.

D. The new applicant represents the future of the filming industry. The evaluator should guide, encourage and protect the new performer.

E. The evaluator shall bring any unsafe act or practice to the attention of the individual or individuals involved, and/or other appropriate officials.

F. The evaluator will abide by all terms and conditions of the authorization or waiver.

D. Re-Qualification. The FSDO inspector shall review and re-designate evaluators based on the following:

1. Evaluator request for re-designation;

2. The number of evaluations conducted in the previous two-year period;

3. The quality and thoroughness of evaluation reports submitted by the Evaluator;

4. Safety record of performers to whom the evaluator granted recommendations;

5. Any grievances concerning the evaluator.

6. Need, as determined by the FAA.

E. Privileges. An evaluator is authorized to perform the following:

1. Accept application, FAA Form 7711-2, APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION, appropriately completed by the applicant and submit it to the FSDO after the evaluation is completed.

2. Issue FAA Form 8710-7, Aerobatic Competency Card, with the limitation, VALID FOR MOTION PICTURE AND TELEVISION FILMING ONLY, to applicants whom the evaluator has tested and found qualified.

3. Issue letters of discontinuance when the practical test is terminated because of situations such as unforecast weather, the applicant or evaluator becomes physically incapacitated, the aircraft has mechanical difficulties after the evaluation has begun, or other unanticipated situations.

4. Charge each applicant a reasonable fee for services. The amount of the fee should be comparable to those that may be charged by a Designated Pilot Examiner in the same geographical area and the effect of passing or failing an evaluation on the fee, should be clearly understood by the applicant before the evaluator accepts an application.

F. Responsibility. The evaluator is an important link in the degree of professionalism and safety that result from the evaluations conducted and by being alert for any activities that may appear to be unsafe. The evaluator is responsible for reporting the following to the jurisdictional FSDO office:

1. A record of each evaluation performed;

2. Any denial and the reasons for the denial (unsatisfactory/incomplete evaluation).

FIGURE 52-5
MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATORS - Continued

3. In the event that an evaluator observes a questionable activity, he or she should first bring it to the attention of the individual(s) involved.

4. If the evaluator feels that talking to the individual pilot has not resolved the matter, the evaluator will bring the matter to the attention of the local FSDO.

5. The evaluator does not have the responsibility or the authority to make the decision on how the matter should be resolved.

G. Issuance of a Statement of Acrobatic Competency. An inspector issues a Statement of Acrobatic Competency upon an applicant's successful completion of an oral examination and, if required, a flight demonstration. The examination and demonstration are conducted by an industry MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATOR. (See evaluation Sample Ground Evaluation Checklist and Standard and Air Evaluation Checklist and Standards are found at the end of this figure 52-5.)

H. Administration of Evaluations. The General Aviation and Commercial Division, AFS-800, at FAA headquarters in Washington, DC is responsible for the development of selection procedures regarding Motion Picture and Television Filming Aerobatic Evaluators.

1. The regional Flight Standards division manager is responsible for the evaluator program within that region. The region ensures that FSDO's conform to national guidelines.

2. The Van Nuys FSDO, Western Pacific Region, may be contacted by any FSDO having questions concerning the authorization of an evaluator. They may be contacted at (818) 904-6291.

3. Motion Picture and Television Filming pilots and aircraft are operated solely under 14 CFR part 91 and for which the FAA does not have sufficient qualified inspector staff to conduct either the initial qualification or proficiency evaluations required.

4. A Motion Picture and Television Filming Aerobatic Evaluator operates under the direct supervision of the FSDO that holds the examiner's designation file. The FSDO issues and maintains the evaluators LOA

5. The FSDO will keep a file on each evaluator within its district. The file may contain photocopies of the information, or may be an electronic file from which data is easily retrieved. If an electronic file is maintained and is accessible to the region or division, the office does not need to maintain duplicate records. The evaluators file will be reviewed annually.

A. The following may be maintained in an electronic file:

(a) records of surveillance/inspections; and

(b) evaluating activity log, including at least the applicant's name, aircraft type, N-number, date of evaluation, time devoted to oral and flight evaluation a copy of the application and a copy of the issued FAA Form 8710-7.

B. Photocopies of the following must be retained:

(a) Letter of Authority

(b) The valid pilot, medical (if required), and flight instructor certificates or current Integrated Safety Information Subsystem (ISIS) data verifying the same;

(c) The most recent authorization renewal;

(d) All correspondence from the public concerning the evaluator.

FIGURE 52-5
MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATORS - Continued

While the LOA may be issued by the FSDO in whose geographic area the evaluator applicant resides, the evaluator is not restricted to any geographic area. However, the evaluator should coordinate evaluations and intent with the FSDO responsible for the geographic area where the evaluation will be held.

I. Supervision. Evaluators operate under the direct supervision of the FSDO that holds the authorization file. Headquarters and regional offices normally do not have direct contact with the evaluator.

Inspectors should always welcome the opportunity to discuss procedures and standards and to observe evaluators at their request to resolve questions on techniques, procedures and standards. Each evaluator should be encouraged to attend safety meetings and flight clinics conducted within the area to keep informed of new developments and pilot activities.

J. Review of Evaluator's Decision. Any applicant who is not satisfied with an examiner's decision may obtain another appropriate evaluation from a FSDO inspector without prejudice. In such cases, the applicant shall be given the complete test, including any phases already approved by the examiner. A complete new application must be prepared.

EVALUATION PROCEDURES.

Prior to the Motion Picture and Television Filming Aerobatic Evaluation, the applicant should become familiar with the air and ground evaluation standards. By using these standards, the applicant can be sure that he or she is adequately prepared for both the ground (oral) and flight phases of the evaluation. (See Sample Ground Evaluation Checklist and Standard and Sample Air Evaluation Checklist and Standard included at the end of figure 52-5.)

It is not the responsibility of the evaluator to provide waivered/authorized airspace for the evaluation. It is the responsibility of the applicant to ensure the appropriate waivered airspace has been applied for and/or activated. The evaluation airspace must be waivered/authorized to the altitude that the applicant has requested for his or her aerobatic competency for filming. The evaluation site must be accessible to the evaluator by surface since the evaluator will observe the evaluation flight from the ground.

A. Pilot/Aircraft Documents. The applicant must be prepared to provide, if requested, the evaluator with appropriate documentation to show that both the pilot and aircraft are authorized for the type of flying contemplated. These documents include, but may not be limited to, the following:

1. Pilot

(a) Pilot certificate with appropriate ratings

(b) Current Medical

(c) Previous statement of aerobatic competency, if any

(d) Current flight review

(e) Current LOA, if appropriate

(f) Applicant's performance sequence (shall include all maneuvers that will be flown during filming sequences.

2. Airspace.

(a) FAA waiver/authorization covering the time and airspace for the flight evaluation

FIGURE 52-5
MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATORS - Continued

3. Aircraft.

(a) Registration

(b) Airworthiness Certificate

(c) Supplemental Type Certificates and Field Approvals, if appropriate

(d) Evidence that the aircraft is structurally capable of performing the contemplated maneuvers safely

(e) Current LOA, if appropriate.

B. Proper Completion of Application.

1. Prior to starting the evaluation, the evaluator must ensure the applicant has completed the 7711-2 application and that all signature blocks have been signed as appropriate. Ensure that the applicant data is correct.

2. Ground (Oral) Evaluation Notes and Air Evaluation Notes: The evaluator should make notes of any comments he/she makes for the applicants benefit.

3. Remarks for placement in Limitations section of FAA Form 8710-7 shall be noted. All 8710-7 Aerobatic Competency's must have, "VALID FOR MOTION PICTURE AND TELEVISION FILMING ONLY", placed in the limitation box plus any additional limitations determined, example; "no vertical maneuvers" or "loops and rolls only, etc."

4. Approved Aircraft: Enter aircraft by make and model only and must contain all makes and models for which the certificate is being issued. An evaluator may approve aircraft within a series. For an initial evaluation or when adding an aircraft to a current competency card, the applicant will have to perform in each aircraft for which they want a recommendation.

5. For a renewal, an evaluator may require a flight evaluation in each type aircraft shown on the applicant's current card; however, an evaluator may also recommend re-certification for more than one type aircraft for filming when using more than one type aircraft without requiring a flight evaluation in all of the aircraft used, provided the pilot meets the experience requirements for renewal. The experience need not have been all accomplished in each aircraft used, but rather it is a cumulative experience required for the year.

6. The expiration date of the Statement of Aerobatic Competency will be based on the date of the flight evaluation. If a flight evaluation was not required, the expiration date will be based on the date of the oral evaluation.

7. Following the evaluation, all information listed in G, Administration of Evaluation, 5A(b), as follows, must be submitted to the FSDO of geographic jurisdiction of the evaluator.

(a) Applicant's name

(b) Applicant's certificate number

(c) Aircraft type

(d) N-number

(e) Date of evaluation

(f) Time devoted to oral and flight evaluation

FIGURE 52-5
MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATORS - Continued

(g) Copy of completed FAA Form 7711-2 application

(h) Draft copy of completed FAA Form 8710-7, Statement of Aerobatic Competency.

C. Qualifications and Limitations.

1. All initial evaluations must include both ground and flight evaluations.

2. An biennial renewal will be required for an aerobatic competency card. This flight evaluation may take place while filming as long as the criteria for evaluation set forth in the evaluation checklists and standards are followed. Changes in altitude or the addition of a new aircraft to the card require a flight evaluation in a practice box, not during actual filming.

3. In the event that it is determined that an aerobatic competency card is materially inaccurate or has been incorrectly issued, that card becomes immediately null and void and that a new and corrected card be immediately issued.

SAMPLE GROUND EVALUATION CHECKLIST AND STANDARD

A. General. (to be completed by all applicants)
[ ] A. Review of applicant's experience
[ ] 1. Certificate check (license, medical flight review currency and LOA, if appropriate)
[ ] 2. Total flying time and time in type
[ ] 3. Aerobatic time
    [ ] a. total
    [ ] b. in type
[ ] B. The applicant will exhibit appropriate knowledge on the following: personal motivation, philosophy, and reasons for obtaining an aerobatic competency card for motion picture and television filming.
[ ] C. Understanding of past history of filming accidents and common causes.
[ ] D. Aerodynamics as it relates to the applicants sequence (turn performance and energy management).
[ ] 1. Relationship between true airspeed and; lift, drag, turn rate, and turn radius
[ ] 2. Relationship between indicated and true airspeed
[ ] 3. The definition and significance of corner speed and maneuver speed and how it is determined for your specific aircraft
[ ] 4. Technique for minimum altitude vertical recovery
[ ] 5. Limitations of aircraft (V_{ne} or V_g diagram)
[ ] 6. Pilot's understanding of control of induced drag and how it can be controlled from the cockpit
[ ] 7. Capabilities of pilot's specific aircraft
    [ ] a. wing loading
    [ ] b. power to weight
    [ ] c. G limits
    [ ] d. V_{ne} V_{so}
    [ ] e. special modifications
    [ ] f. structural integrity, fatigue
    [ ] g. use of pyro
[ ] 8. Review applicants specific sequence
    [ ] a. logic of sequence/energy management
    [ ] b. energy loading maneuvers
    [ ] c. effects of installed equipment
    [ ] d. special adjustments for high density altitude
    [ ] e. blown maneuver or sequence interruption
[ ] 9. Out of control flight (planned or unplanned)

FIGURE 52-5
MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATORS - Continued

[ ] 10. Night time considerations
  [ ] E. Operation at High Density Altitude
    [ ] 1. Use of density altitude chart
    [ ] 2. Increased true airspeed and pull-out performance (turn radius increases with square of TAS)
    [ ] 3. Engine performance degradation
    [ ] 4. Ability to maintain energy
    [ ] 5. Sequence modifications
  [ ] F. Physiological Effects/Human Factors in the Air Show Environment
    [ ] 1. Temperature effects (high and low)
    [ ] 2. Hydration
    [ ] 3. Stress
    [ ] 4. G tolerance
    [ ] a. insidious characteristics of loss of G tolerance
    [ ] b. affected greatly by physical condition
    [ ] 5. Density altitude effects on the body
  [ ] G. Weather Considerations
    [ ] 1. Wind velocity and direction
    [ ] 2. Ceiling and visibility
    [ ] 3. Rain on laminar wings (gliders, Long EZ, etc.)
    [ ] 4. Prepared and practiced low show
  [ ] H. Emergencies
    [ ] 1. Structural failure and aircraft control
    [ ] 2. Engine failure
    [ ] 3. Fire
    [ ] 4. Communications failure
    [ ] 5. Disorientation
    [ ] 6. Bail out and parachute considerations

B. Performance Considerations. (Must be reviewed for notation on competency card)
[ ] A. Level 1000' AGL pass over runway centerline for new applicant, OR level 500' AGL pass over runway centerline for renewal applicant
    [ ] 1. Power requirements
    [ ] 2. Optimizing aircraft capability
    [ ] 3. Timing for opposing maneuvers
    [ ] 4. Emergency procedures
[ ] B. Level inverted, 1000'AGL pass over runway centerline for new applicant, OR level inverted 500' AGL pass over runway centerline for renewal applicant
    [ ] 1. Power requirements
    [ ] 2. Optimizing aircraft capability
    [ ] 3. Timing for opposing maneuvers
    [ ] 4. Emergency procedures
[ ] C. Re-locate to authorized area for demonstration of air work maneuvers, i.e., loop, roll, hammerhead, Cuban 8 etc.
    [ ] 1. Sequence of routine events
    [ ] 2. Plan minimum altitude
    [ ] 3. Plan speeds and energy management
    [ ] 4. Aerodynamic effect of installed equipment, i.e., camera mounts etc.
    [ ] 5. Emergency procedures

AIR EVALUATION CHECKLIST AND STANDARDS

[ ] A. Air evaluation checklist for applicants requiring flight evaluation
  [ ] 1. Review
    [ ] a. applicant's pilot certification including license and type
    [ ] b. medical certificate
    [ ] c. current flight review
    [ ] d. LOA if appropriate

FIGURE 52-5
MOTION PICTURE AND TELEVISION FILMING AEROBATIC EVALUATORS - Continued

[ ] e. aircraft airworthiness certificate and associated documents
[ ] f. parachute packing dates
[ ] Aircraft Pre-Flight
[ ] a. Normal aircraft pre-flight
[ ] b. Special emphasis for aerobatic flight
[ ] i. Seatbelts and shoulder harnesses
[ ] ii. Cockpit for loose objects
[ ] iii. Fuselage and empennage
[ ] iv. Parachute inspection
[ ] v. Altimeter setting
[ ] vi. Fuel and oil for planned sequence
[ ] vii. Considerations for inverted system (if installed)
[ ] viii. Smoke system and/or other special modifications
[ ] ix. Pyro mounts, arming mechanism and safety features
[ ] c. Personal preparation
[ ] i. Review of sequence
[ ] ii. Briefing
[ ] iii. Review of site restrictions
[ ] iv. Review of weather conditions
[ ] v. Review physiological factors

[ ] B. Flight Evaluation
[ ] 1. Precision of maneuvers
[ ] 2. Orderly execution of planned sequence in accordance with briefings
[ ] 3. Ability to adhere to flight lines and compensation for wind
[ ] 4. Ability to adhere to airspeed and altitude limitations
[ ] 5. Demonstration of engine out emergencies (if appropriate)
[ ] 6. Ability to handle in-flight sequence changes (if appropriate)
[ ] 7. Use of special effects, i.e. smoke, pyrotechnics, etc. turn-arounds and timing

[ ] C. Debriefing
[ ] 1. Critique applicant on complete flight from taxi and takeoff to chocks and shutdown
[ ] 2. Discuss all safety considerations of the flight evaluation with applicant
[ ] 3. In the event the applicant fails to qualify for the recommendation for aerobatic certification, fully explain to applicant specifics of applicant's failure to qualify and carefully document applicant's observations on the applicant's application form
[ ] 4. Suggest improvements perceived by the evaluator to enhance applicant's performance concerning the presentation, maneuver sequence, specific maneuvers, safety of flight

FIGURE 52-6
PART 91 MOTION PICTURE AND TELEVISION OPERATIONS MANUAL DEVELOPMENT GUIDE

Each Motion Picture and Television Operations Manual must contain at least the following items, although it is not restricted to these items.

1. Company Organization.

(a) Business name, address, and telephone number of applicant.

(b) List of pilots to be used during the filming, including their pilot certificate numbers. This information may be placed in the plan of activities. The list may include special pilot authorizations or endorsements (aerobatic, external load etc.).

(c) List of aircraft by make, model, Serial or registration number. This information may be placed in the plan of activities.

2. Distribution and Revision.

(a) Procedures for revising the Motion Picture and Operations Manual to ensure that all manuals are kept current. A list of effective pages may be appropriate.

(b) Revisions for the accepted Motion Picture and Television Operations Manual should be forwarded to the FSDO at least 15 days before the proposed effective date.

3. Persons Authorized. The Motion Picture and Television Operations Manual must include procedures to ensure that no persons, except those persons consenting to be involved and necessary for the filming production, are allowed within 500 feet of the filming production area. This provision may be reduced to no less than 200 feet in the event that a suitable, equivalent level of safety can be achieved. An equivalent level of safety may be determined by evaluation of the filming production area and the degree of terrain features, buildings etc. that will provide a safety barrier to observers in the event that unplanned debris were to be dispelled through the air.

4. Area of Operations. The Motion Picture and Television Operations Manual must define the area (city, state or states, etc.) that will be used during the term of the waiver.

5. Plan of Activities. The Motion Picture and Television Operations Manual must include procedures for the submission, 3 days prior to scheduled filming, which includes a written plan of activities, to the local FSDO having jurisdiction over an area of proposed filming. The manual should indicate acknowledgment of the requirement for FAA acceptance of the plan of activities prior to beginning filming operations. The plan of activities must include at least the following:

(a) Dates and times for all flights,

(b) Name and phone number of person responsible for the filming production event,

(c) Make, model, serial number or registration number of aircraft to be used and type of airworthiness certificate, including category,

(d) Names and certificate numbers of pilots involved in the filming production event,

(e) A statement that permission has been obtained from property owners and/or local officials to conduct the filming production event,

(f) Signature of waiver holder or a designated representative, and

(g) A general outline, or summary, of the flight activity schedule, to include maps or diagrams of the specific filming location, if necessary.

FIGURE 52-6
PART 91 MOTION PICTURE AND TELEVISION OPERATIONS MANUAL DEVELOPMENT GUIDE - Continued

6. Permission to Operate. The Motion Picture and Television Operations Manual shall specify requirements and procedures that the waiver holder will use to obtain permission from property owners and/or local officials (e.g., police, sheriff, fire departments) as appropriate for the conduct of all filming operations when using the waiver.

7. Security. The manual must specify the method of security that will be used to exclude all persons not directly involved with the operation from the location. This should also include procedures that will be used to stop activities when unauthorized persons, vehicles, or aircraft enter the operations area, or for any other reason, in the interest of safety.

8. Briefing of Pilot/Production Personnel. Procedures must be included to brief personnel of the risks involved, emergency procedures, and safeguards to be followed during the filming production event. Personnel will also be briefed on any additional provisions that may be issued by the local FSDO, including the location of boundaries or any other time limits.

9. Certification/Airworthiness. Procedures must be included to ensure that inspections will be in accordance with 14 CFR parts 43 and 91, and applicable operating limitations. The aircraft to be used may be certificated in any category, including experimental, provided the requirements of 14 CFR §§ 91.7, 91.9 and 91.203 are met.

10. Pilot Personnel - Minimum Requirements. The operator must establish and specify the minimum pilot requirements. Minimum requirements should meet or exceed the following:

(a) A current U.S. commercial pilot certificate with ratings appropriate to the category and class aircraft to be used under the terms of the waiver;

(b) At least 500 hours as PIC logged;

(c) A minimum of 100 hours in the category and class of aircraft to be used;

(d) A minimum of 5 hours in the make and model aircraft to be used under the waiver; and

(e) In the event that the 1500-foot minimum standard contained in 14 CFR § 91.303(d) is to be waived, the pilot performing aerobatic maneuvers must hold an FAA Form 8710-7, Statement of Acrobatic Competency, for the operations to be performed.

11. Communications. The Motion Picture and Television Flight Operations Manual must contain procedures to provide communications capability with all participants during the actual operation and filming. The applicant can use oral, visual, or radio communications as along as it keeps the participants continuously apprised of the current status of the operation.

12. Accident Notification. The Motion Picture and Television Flight Operations Manual must contain procedures for notification and reporting of accidents.

FIGURE 52-7
SAMPLE LETTER OF DISAPPROVAL OF AN APPLICATION

FAA Letterhead

[*date*]

[*applicant's name and address*]

Dear [*applicant's name*]:

This letter is to inform you that the application you submitted on [*indicate date*] has been disapproved for the reasons listed in the "Remarks" section of FAA Form 7711-2.

Please make the corrections noted and return to this office within 15 days of receipt of this letter.

If you have any questions or comments please feel free to contact this office at the following telephone number [*indicate number*].

Sincerely,

[*principal operations inspector's signature*]

FIGURE 52-8
SAMPLE LETTER OF NON-ACCEPTANCE OF A FLIGHT OPERATIONS MANUAL

FAA Letterhead

[*date*]

[*operator's name and address*]

Dear [*operator name*]:

This is to inform you that the Motion Picture and Television Flight Operations Manual submitted on [*indicate date*] has been determined unacceptable for the following reasons:

[*list all reasons for non-acceptance*]

Please make the corrections noted, and resubmit to this office within 15 days of receipt of this letter.

If you have any questions please feel free to contact this office during regular business hours at the following telephone number [*indicate number*].

Sincerely,

[*principal operations inspector's signature*]

FIGURE 52-9
SAMPLE LETTER OF ACCEPTANCE OF A FLIGHT OPERATIONS MANUAL

FAA Letterhead

[*date*]

[*operator's name and address*]

Dear [*operator's name*]

This is to inform you that the Motion Picture and Television Flight Operations Manual submitted on [*indicate date*] has been accepted.

If you have any questions please feel free to contact this office during regular business hours at the following telephone number [*indicate number*].

Sincerely,

[*principal operations inspector's signature*]

FIGURE 52-10
SAMPLE LETTER OF REMINDER

FAA Letterhead

[*date*]

[*operator's name and address*]

Dear [*operator's name*]:

This letter is a reminder that a plan of activities must be submitted, as outlined in your accepted Motion Picture and Television Flight Operations Manual, to the local Flight Standards District Office (FSDO) having jurisdiction over the area of proposed filming.

The plan of activities must be submitted at least 3 days before actual filming begins.

If you have any questions or comments please feel free to contact this office at the following telephone number [*indicate number*].

Sincerely,

[*principal operations inspector's signature*]

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CHAPTER 53. SURVEILLANCE OF A MOTION PICTURE AND TELEVISION FILMING PRODUCTION EVENT

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEMS ACTIVITY CODE: 1684

2. OBJECTIVE. The objective of this task is to determine if the holder of a Certificate of Waiver is in compliance with the terms of the Certificate of Waiver. Completion of this task results in the continuation or cancellation of an existing waiver.

3. GENERAL.

A. Surveillance. This chapter provides surveillance procedures for evaluating a filming event conducted under the terms of a Certificate of Waiver. These procedures ensure that current programs are thoroughly reviewed and evaluated with an emphasis on safety and intended methods of compliance.

B. Issuance of Waiver. Federal Aviation Administration (FAA) Form 7711-2, Application for Certificate of Waiver or Authorization (figure 52-1), is reviewed and approved or disapproved. FAA Form 7711-1, Certificate of Waiver or Authorization (figure 52-2), is issued before the filming production event. (Refer to chapter 52, Issue a Certificate of Waiver for Motion Picture and Television Filming.) Unless circumstances warrant or the filming event occurs outside the jurisdiction of the certificate holding Flight Standards District Office (FSDO), the district office manager assigns surveillance to the inspector who approved the Certificate of Waiver.

C. Compliance. The waiver holder is responsible for compliance with the terms of the Certificate of Waiver and its special provisions.

D. Plan of Activities. At least three days prior to the scheduled filming, the operator must submit a written plan of activities to the FSDO having jurisdiction over an area of proposed filming. This three day notification requirement may be waived for waiver holders who are contacted for filming at short notice. The waiver holders must justify the exception to the three day requirement.

(1) The plan of activities must include:

(a) the date and time of the filming;

(b) the name and phone number of the person responsible for the event; and

(c) an outline or summary of the flight activity, including maps or diagrams of the location, if necessary.

E. Waiver Holder Responsibilities. The waiver holder's responsibilities include, but are not limited to:

(1) ensuring the event is run properly, in compliance with all terms and limitations of the waiver and plan of activities;

(2) being familiar with the waiver and aware of individuals responsible for crowd-control, emergency facilities, transient aircraft lookouts, etc.;

(3) if transient aircraft enter the area, advising pilots to discontinue their activities until the transient aircraft is clear; and

(4) ceasing operations while spectators are cleared from unauthorized areas.

F. Unauthorized Persons. The public must be protected from undue hazard during filming events. The inspector should keep in mind that filming events may cause passersby to stop to watch the activities. For example, the film participants are performing a mock dogfight over a field bordered by a road. People begin to gather to watch the activities.

(1) In this case, the inspector may have to stop the filming production event until the waiver holder can have the crowd moved to a non-restricted area and thereby regain compliance with the Certificate of Waiver.

(2) The inspector should, therefore, suggest to the waiver holder that crowd-control procedures of this type be included in the plan of activities.

4. INSPECTOR RESPONSIBILITIES.

A. Surveillance Responsibilities. The inspector's responsibility is to provide adequate surveillance of the filming event and to ensure compliance with the provisions of the waiver, associated special provisions, and the plan of activities. The inspector is also on hand to provide guidance in the waiver's general and special provisions. The inspector is not responsible for the management, control, or direction of the filming event. The inspector should not interrupt an event except to address safety-related issues requiring immediate attention. Other inspectors may be assigned to assist in the surveillance; however, all coordination and communication with the waiver holder should be through the inspector who is primarily responsible for the surveillance.

B. Inspector Authority. While not limited to the following, the inspector generally has authority to:

(1) accept changes to the effective time and date of the plan of activities;

(2) authorize additional performers to the Certificate of Waiver; and

(3) cancel or delay any or all events if deemed necessary in the interest of safety.

5. PRE-EVENT BRIEFING. After reviewing the plan of activities, the district office manager may determine that on-site surveillance is required. In this case, the inspector will arrange a pre-event briefing with the waiver holder or a designated representative.

A. Briefing Content. It is imperative that the briefing cover every aspect of the event. If ground-to-air signals are to be used, they must be clearly understood by all participants. The signals used to discontinue a routine or recall participants should be emphasized.

B. Role of FAA Inspector. The inspector is not responsible for conducting the briefing, but must be available at the briefing for any questions concerning the Certificate of Waiver and its provisions. The person designated in the plan of activities as responsible for the filming event should conduct the briefing. However, a designated representative or other person may conduct the filming event. For example, the first briefing may be handled by the waiver holder or a designated representative, while an event involving an aerial dogfight may be handled by the stunt coordinator.

6. AEROBATIC COMPETENCY. In order for any pilot to perform aerobatic maneuvers at filming events authorized by a Certificate of Waiver, the pilot must have in his or her possession FAA Form 8710-7, Statement of Acrobatic Competency (figure 53-1). The FAA has determined that an experienced and qualified aerobatic inspector or an experienced and qualified aerobatic industry evaluator, designated by way of letter of authorization, may issue FAA Form 8710-7, Aerobatic Competency for motion picture and television filming. The inspector or industry evaluator will issue the card stating:

VALID FOR MOTION PICTURE AND TELEVISION FILMING ONLY.

NOTE: The Statement of Acrobatic Competency must have been issued for up to 24 calendar months.

A. It is generally agreed that the level of safety of any segment of the industry is critically dependent upon that industry's assuming responsibility for itself and its safety programs. In this instance, the motion picture/television industry was very proactive in its procedures that would reflect negatively on general aviation.

B. The FAA is convinced that industry evaluators are people who are credible and dedicated to fulfilling their duties to conduct peer review, counsel, and make appropriate recommendations to the FAA.

NOTE: For all airshow and/or aerobatic competency performances the procedures outlined in chapter 31, Issue/Renew/Rescind a Statement of Acrobatic Competency, will apply.

C. The Van Nuys, CA. FSDO, who holds the vast majority of the motion picture/television manuals, may be contacted if additional circumstances or questions arise.

7. OBSERVANCE OF FILMING EVENTS. The FSDO that issues a Certificate of Waiver or accepts a plan of activities determines the amount of surveillance required to ensure compliance with the terms of the waiver. District office managers should consider the extent of surveillance necessary with respect to the number of aircraft, type of activity, and the potential impact on aviation safety.

A. Surveillance Team. If the district office manager determines that the complexity of the event requires on-site surveillance, at least one qualified operations inspector or safety program manager shall be assigned

to observe the filming event. Airworthiness, avionics, or other operations inspectors may be assigned. The inspector designated as team leader may also be responsible for training other operations inspectors in filming event surveillance.

B. Surveillance Team Responsibilities. The surveillance team is responsible for assuring that the waiver holder complies with the Certificate of Waiver and the associated special provisions.

C. Control Point. Experience has proven the value of establishing a control point where the certificate holder, or a designated representative, can control the event. Before the event, a control point site should be established, and the inspector should be familiar with the location of the control point. Since the control point is an ideal location for conducting a portion of the surveillance, the inspector shall be allowed full, easy access to and from the control point.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of regulatory requirements in Title 14 of the Code of Federal Regulations (14 CFR) part 91 and FAA policies and qualification as an aviation safety inspector (ASI)(operations).

B. Coordination. This task may require coordination with the airworthiness unit, the regional office, Headquarters, AFS-820 and air traffic.

2. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- Part 61
- Related task in chapter 52, Issue a Certificate of Waiver for Motion Picture and Television Filming 14 CFR § 91.119 (Filming Production Event)
- Order 8700.1, General Aviation Operations Inspector's Handbook
- PTRS Field Office Manual

B. Forms.

- FAA Form 7711-1, Certificate of Waiver or Authorization, including the attached FAA Form 7711-2, Flight Operations Manual, and special provisions
- FAA Form 8000-36, PTRS Transmittal Form

C. Job Aids.

- Sample letters and figures

3. PROCEDURES.

A. Issue/Renew/Rescind a Statement of Acrobatic Competency card for Motion Picture/Television Filming. An applicant for a Statement of Acrobatic Competency card should contact the geographically located FSDO for a list of authorized evaluators and a copy of the check list that will be used for the evaluation.

(1) *Schedule Evaluation.* The applicant contacts an appropriate evaluator and schedules the time and location of the examination and demonstration. Form 8710-1, Airman Certificate and/or Rating Application, must be appropriately completed by the applicant.

(2) *Conduct Evaluation.* If the applicant does not meet the applicable standards of the maneuvers check list, inform the operator of the reasons for the unsatisfactory performance and reschedule the evaluation.

(3) *Issue Certificate.* Upon satisfactory completion of the evaluation, the inspector/evaluator will issue FAA Form 8710-7, Statement of Acrobatic Competency. The limitation section must state:

VALID FOR MOTION PICTURE AND TELEVISION FILMING ONLY.

(4) When issuing the certificate, the inspector/evaluator should:

(a) List the authorized maneuvers, altitude limitations, and approved aircraft on the reverse side of the form. (See figures 53-1 and 53-2.) More than one card may be required to list all approved aircraft.

(b) Sign and date the form; the form is dated on the date of the evaluation and may be issued for a period of up to 24 months.

(c) The FAA inspector will make copies of the 8710-1 and the 8710-7 with maneuvering limitations for the district office files. The industry evaluator will make copies of FAA Forms 8710-1 and 8710-7 with maneuvers limitations for the evaluator files and will submit copies of all forms to the FSDO. The industry evaluator will also prepare and submit a PTRS form to the FSDO.

(d) Present the original FAA Form 8710-7 to the applicant. Do not forward a copy to AFS-760, Airman Certification Branch.

(e) The inspector will make the appropriate PTRS entry.

NOTE: Original copies of all evaluation documentation will be retained by the evaluator.

B. Task outcomes. Completion of this task results in issuance, renewal, or denial (figure 53-3) of a Statement of Acrobatic Competency.

4. FUTURE ACTIVITIES.

A. The inspector could take part in an investigation as a result of an accident, incident, or violation of the regulations, and be called upon to rescind FAA Form 8710-7, or require re-evaluation.

B. FAA Form 8710-7 may be rescinded based on the facts, conditions and circumstances of an accident or incident that raises doubt about the pilot's aerobatic competency.

5. PLAN OF ACTIVITIES.

A. Receipt of a Plan of Activities.

(1) Open PTRS by making appropriate PTRS entries.

(2) Ensure that the plan of activities contains the items discussed in section 1, paragraph 3.

(3) If the plan of activities is incomplete:

(a) Prepare a notice of non-acceptance to the waiver holder stating reasons for non-acceptance (figure 53-2). Include in the letter a suspense date for submission of a corrected plan of activities. This notice may be delivered by U.S. Mail, electronic mail or fax.

(b) Retain a copy of the plan of activities for future comparison.

(c) Return the plan of activities with the letter of non-acceptance to the waiver holder.

(d) Make appropriate PTRS entries.

(4) If the plan of activities is complete, continue the task.

B. Review District Office File and Plan of Activities.

(1) Review the documents in the operator's district office file and the plan of activities or coordinate with the waiver holding district office to determine if the proposed filming production event can be accomplished safely.

(2) If the filming production event cannot be safely accomplished IAW the Certificate of Waiver, the Motion Picture/Television Operations Manual, and the plan of activities, return the plan of activities to the waiver holder with a letter of non-acceptance (figure 53-2).

(3) If the filming production event can be accomplished safely, submit the plan of activities to the district office manager for determination if on-site surveillance is required.

C. On-site Surveillance.

(1) If the district office manager determines that on-site surveillance is not required:

(a) Retain a copy of the plan of activities for the operator's district office file.

(b) Prepare a letter of acceptance of the plan of activities (figure 53-3).

(c) Return the original plan of activities with the letter of acceptance to the waiver holder.

(d) Terminate the task by making appropriate PTRS entries.

(2) If on-site surveillance is required:

(a) Retain a copy of the plan of activities for the district office file.

(b) Prepare a notice/letter of acceptance of the plan of activities (figure 53-3).

(c) Return the original plan of activities with the notice/letter of acceptance to the waiver holder.

(d) Make appropriate PTRS entries.

(e) Continue with the task.

D. Pre-Surveillance Activities. Use the Filming Production Event Job Aid (figure 53-4) to complete the task.

(1) Become familiar with the Certificate of Waiver's special provisions, the Flight Operations Manual, the plan of activities, and the regulations that were waived.

(2) Determine the types of equipment (e.g., VHF radio, camera) and reference materials (e.g., FAA Form 7711-1, FAA Form 7711-2, Flight Operations Manual) required to conduct the surveillance.

(3) For FAA teams assigned to surveillance, brief each inspector on his or her duties and responsibilities. Emphasize that all contacts with the waiver holder, or a designated representative, must be coordinated with the team leader.

E. FAA Introduction. At the site of the filming production event, introduce all members of the FAA team to the waiver holder, or designated representative, and any other key personnel.

F. Filming Production Event Briefing. Attend and observe (all FAA surveillance personnel) the filming production event briefing.

(1) Ensure that the appropriate participating personnel attend the briefing. These personnel may include:

(a) All participating pilots,

(b) Stunt Coordinator,

(c) Security personnel, and

(d) Refueling personnel.

(2) Ensure that the following information is covered, as appropriate, during the briefing:

(a) Certificate of Waiver and special provisions, Flight Operations Manual, and the plan of activities,

(b) Aircraft parking and starting,

(c) Taxi procedures,

(d) Radio communications and recall procedures,

(e) Takeoff procedures,

(f) Aviation activities to be conducted during the filming production event including pyrotechnics and special effects,

(g) Approach and landing procedures,

(h) Emergency procedures,

(i) How to control spectators who are not part of the filming production event, and

(j) Method of control for participants of the filming production event.

G. Inspect Airman Certificates. Ensure that the participating pilots have in their personal possession.

(1) At least a Commercial Pilot Certificate.

(2) A current medical certificate (except glider and balloon pilots).

(3) A current Statement of Acrobatic Competency, or other required authorizations if required (figure 53-1).

H. Inspect Participating Aircraft. This inspection may be conducted by an airworthiness inspector. Inspect the following:

(1) The aircraft's general condition;

(2) The aircraft's airworthiness and registration certificates;

(3) The operating limitations associated with Special Airworthiness Certificates;

(4) The Operating Certificate or Letter of Deviation Authority for large aircraft used in sport parachuting (part 125); and

(5) The modifications to aircraft that accommodate sport parachutists and documentation of field approval by the FAA, or a Supplemental Type Certificate (STC).

I. Ensure Compliance with Terms of Waiver. Inspect the filming production event site for compliance with the special provisions of the waiver.

(1) Ensure that a control point has been established from which the holder or a designated representative can direct the filming production event, and be continuously available to FAA and the person designated responsibility for the overall safety of the filming production event.

(2) Ensure that the communications capability necessary to control the filming production event is located at the control point.

(3) Ensure that the inspection team members have continuous access to the control point.

(4) Ensure communications capability with participating aircraft, security, and emergency equipment.

(5) If a discrepancy is noted, immediately bring it to the attention of the waiver holder.

J. Observe Filming Production Event. Ensure that all provisions of the waiver, Flight Operations Manual, plan of activities, and any additional special provisions are adhered to in all cases.

(1) If a minor problem is noted, discuss the problem with the appropriate individual during the debriefing.

(2) If an incident that is in noncompliance with the terms of the waiver or 14 CFR, advise the waiver holder of the actions necessary to regain compliance.

(3) If a serious safety problem is noted, immediately bring it to the attention of the waiver holder, or designated representative.

(a) Observe actions taken by the waiver holder or the designated representative to correct the safety problem.

(b) If the problem is not or cannot be corrected, cancel or delete any or all events that affect the safety of persons or property on the ground or in the air.

(4) Note any discrepancies and the action taken on the Filming Production Event job aid (figure 53-4) and document them later in the comment portion of the PTRS transmittal form.

K. Debrief. After conclusion of the filming production event, discuss with the waiver holder, or designated representative, the following items:

(1) Areas of noncompliance,

(2) Safety-related problems,

(3) Aerobatic competency, and

(4) Opportunities for improvement.

NOTE: If no problems were encountered, apprise the waiver holder.

L. Office File. Place a copy of the following documents in the operator's district office file.

- The plan of activities
- Record of meetings and telephone conversations
- Letter or notification copy of non-acceptance of plan of activities
- Letter of acceptance of a plan of activities
- Any job aids (until PTRS entries are complete then discard)

M. Close PTRS. Make appropriate PTRS entries.

6. *TASK OUTCOMES.* The completion of this task results in one or more of the following:

A. Notice or letter of non-acceptance of a plan of activities

B. Notice or letter of acceptance of plan of activities

7. *FUTURE ACTIVITIES.*

A. Future surveillance of filming production events.

B. Review new or revised plan of activities.

C. Possible cancellation of the Certificate of Waiver.

D. Possible enforcement investigation.

FIGURE 53-1
FAA FORM 8710-7, STATEMENT OF AEROBATIC COMPETENCY

Front

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

STATEMENT OF ACROBATIC COMPETENCY

PILOT: J. J. JONES	
TYPE CERTIFICATE/NUMBER: COMMERCIAL 1234567	
ISSUANCE DATE: 05-01-01	EXPIRATION DATE: 05-31-03
GENERAL AVIATION OPERATIONS INSPECTOR (Signature): J. J. SMITH ANE-BED-FSDO	

FAA Form 8710-7 (5-78)

Back

MANEUVER LIMITATIONS: VALID FOR MOTION PICTURE AND TELEVISION FILMING ONLY.	
ALTITUDE LIMITATIONS: PER WAIVER 14 CFR	AUTHORIZED AIRCRAFT: PITTS SPECIAL
I understand that this statement of competency does not authorize deviation from FAR 91 except as defined by waiver thereto, or to the terms of Special Provisions contained in any waiver to FAR 91.	
PILOT (Signature): J. J. Jones	

FIGURE 53-2
SAMPLE LETTER OF NON-ACCEPTANCE

(Type on FAA letterhead)

[*Date*]

[*Name of Operator*]

[*Address of Operator*]

Dear [*Name of Operator*]

This is to inform you that the plan of activities submitted on [insert date] has been determined to be unacceptable for the following reasons:

[*List reasons for non-acceptance*]

Please make the corrections noted on the plan of activities and resubmit to this office within 15 days of receipt of this letter.

If you have any questions please feel free to contact this office during regular business hours at the telephone number listed above.

Sincerely,

[*Name of Principal Operations Inspector*]

FIGURE 53-3
SAMPLE LETTER OF ACCEPTANCE OF PLAN OF ACTIVITIES

(To be typed on FAA letterhead)

[*Date*]

[*Name of Operator*]

[*Address of Operator*]

Dear [*Name of Operator*]:

This is to inform you that your plan of activities has been received, reviewed, and accepted by this office. Enclosed please find your original plan of activities.

If you have any questions please feel free to contact this office during normal working hours at the telephone number listed above.

Sincerely,

[*Name of Principal Operations Inspector*]

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CHAPTER 96. INTRODUCTION TO PART 133 RELATED TASKS

1. EXTERNAL-LOAD OPERATIONS. Volume 2, chapters 97 through 104 contain guidelines for certification and surveillance of Title 14 of the Code of Federal Regulations (14 CFR) part 133 rotorcraft external-load operators.

2. AMENDMENTS TO PART 133. Past amendments to part 133 are summarized as follows:

A. Civil Operators. All civil rotorcraft external-load operators must be certificated.

B. Restricted Category Rotorcraft. Part 133 permits external-load operations with restricted category rotorcraft except over certain areas.

C. Certificate Expiration. Certificates issued under part 133 are valid for a period of 24 calendar months.

D. Congested Area Operations. Restricted category rotorcraft are prohibited from conducting external-load operations in congested airways, over densely populated areas, or near busy airports where passenger transport operations are conducted.

E. New Load Class. A new Class D authorization has been established to permit the carriage of persons in a Federal Aviation Administration (FAA) approved personnel lifting device.

F. Instrument Flight Rules (IFR) Operations. IFR external-load operations are permitted as specified by the Administrator.

G. Operations Flight Characteristic Demonstration. New operators are relieved of the requirements for an operational flight characteristic demonstration if a demonstration has already been performed by the manufacturer. This information is contained in the rotorcraft flight manual for each rotorcraft.

3. CLASSES OF AUTHORIZATION.

A. Class A External-Loads. Class A is an external-load that cannot move freely, cannot be jettisoned, and does not extend below the landing gear. An example of Class A operation is the carriage of supplies in an approved cargo rack, bin, or seat affixed to the exterior of the aircraft. A cargo rack may be certified with or without a cargo envelope. The FAA-approved flight manual supplement that is required for the cargo rack installation specifies the approved configuration. If the cargo carried is within the envelope specified in the flight manual supplement, the rotorcraft MAY BE operated in accordance with part 91 or 135. If the cargo rack is certified without a cargo envelope or the cargo carried exceeds the specified envelope, flight operations MUST BE conducted in accordance with part 133.

B. Class B External-Loads. Class B is an external-load, carried above or below the skids, which can be jettisoned and is lifted free of land and/or water by a cargo hook or winch. An example of a Class B operation is the placement of an air conditioning unit on the roof of a tall building.

C. Class C External-Loads. Class C is an external-load that can be jettisoned and a portion of the load remains in contact with land or water. Examples of Class C operations are wire stringing, dragging a long pole, or towing a boat or barge.

D. Class D External-Loads. Class D is an external-load other than Class A, B, or C and is approved on an individual basis through the issuance of Operations Specifications (OpSpecs). Class D allows the external carriage of a person other than a crewmember, or a person who is essential to, and directly connected with, the external-load operation, may also be carried as a Class D load.

4. OPERATING RULES.

A. Rotorcraft Load Combination Flight Manual. Rotorcraft external-load operations must be conducted in conformity to the Rotorcraft Load Combination Flight Manual prescribed in 14 CFR part 133, § 133.47. The rotorcraft must be operated in compliance with 14 CFR § 133.45; the rotorcraft and rotorcraft-load combination are authorized under the operating certificate.

B. Carriage of Persons. Part 133 does not provide for "passenger carrying" operations, but does provide for the "carriage of persons" in accordance with 14 CFR § 133.35. If passenger carrying operations are conducted, they should be done in accordance with part 91 or 135. No Class A, B, or C external-load operator may allow a person to be carried during external-load operations unless that person is a flight crewmember; is a flight crewmember trainee; performs an essential function in connection with the external-load operation; or is necessary to accomplish the work activity directly associated with the operation. An operator with Class D approval may be authorized to carry persons other than a crewmember or persons directly connected with the external-load operation. The inspector must ensure that any proposed external-load operations are not a guise for passenger carrying operations conducted for compensation or hire.

(1) The carriage of snow skis as a Class A external-load when skiers are on board the rotorcraft is clearly a passenger carrying operation that is not permitted under the provisions of 14 CFR § 133.35. Baggage carried in a Class A external-load attaching means (such as racks on top of fixed floats) is another example of an operation not permitted by 14 CFR § 133.35. However, if these items are carried in approved cargo racks as described in paragraph 3A, the operation could be conducted under part 91 or 135, which allow for carrying passengers.

(2) An operator with a Class B approval may be authorized to externally carry a crewmember, or a person essential to the external-load operation, with a single engine rotorcraft. The persons in the following examples may be carried as a Class B external-load, which must be jettison able.

(a) Cameramen who are involved in movie making operations.

(b) Trapeze acts or clown acts at airshows or similar entertainment events.

(3) A Class D rotorcraft load combination is the only external-load class permitting the carriage of persons other than crewmembers or persons essential to the external-load operation (14 CFR § 133.1(5)(d)). An example of a person who would have to be carried as a Class D external-load is a harbor pilot being transported from land to a ship in a personnel lifting device. A Class D external-load operation can be conducted only in accordance with the following:

(a) The rotorcraft used must have been type certificated under 14 CFR part 27 or 29, Category A, for its operating weight. With one engine inoperative, it must be able to hover at that operating weight, and in the density altitude conditions that exist when a Class D load is carried.

(b) The rotorcraft must be equipped for direct radio intercommunication among required crewmembers.

(c) The personnel lifting device must be FAA-approved, and have an emergency release that requires two distinct actions to achieve release. For example, a hoist must have a pressure cartridge cable cutter with one guarded switch that requires the pilot to raise the guard before activating the switch. The guard must prevent the pilot from activating the switch inadvertently.

(4) In an emergency involving the safety of persons or property, the certificate holder may deviate from the rules of part 133 to the extent required to meet that emergency. The test to determine whether a deviation is necessary is the availability of alternate means of solving the situation.

(a) Rescue of property must be clearly in the public interest in order to warrant deviation from the operating rules and related requirements.

(b) Under the emergency operating authority (14 CFR § 133.31(b)), the inspector should request a complete report for each deviation from part 133. This may be necessary to determine whether there has been a violation of the rule and to ensure that the operator has not used the authority granted by the provisions of 14 CFR § 133.31(a) to use an emergency situation to circumvent the rules. The report should give a thorough, detailed account of the operation, a description of the act of deviation, and a justification for the deviation. The report must be filed within 10 days of the request by the Administrator.

5. FOREIGN REGISTERED AIRCRAFT. Under the provisions of the North American Free Trade Agreement (NAFTA) certain foreign aircraft may be utilized for operations conducted under part 133. Other aircraft of foreign registry cannot be used in part 133 operations unless permitted under the terms of an exemption. An external-load operator certificate is considered an airworthiness certificate (§ 133.51), and

cannot be issued to an aircraft with other than U.S. registry.

6. RENEWAL, AMENDMENT, CANCELLATION. A rotorcraft external-load operator certificate expires at the end of the 24th month after the month it was issued or renewed. In the event the operator's certificate was lost or destroyed, the operator may get a replacement upon written request to the certificate holding district office (CHDO) . The duplicate certificate is a copy of the currently effective certificate and is marked "duplicate" with the date of re-issuance.

A. Renewal. Application for renewal of a rotorcraft external-load operator certificate must be made on FAA Form 8710-4, Rotorcraft External-Load Operator Certificate Application, to the CHDO. The certificate holder should apply for renewal at least 30 days before expiration of the certificate.

(1) Application for renewal of a certificate will be submitted and processed in the same manner as for original issuance.

(2) The inspector shall compare the renewal application with the expiring certificate. If no substantial changes are noted and the operator has a good record of compliance, the inspector may issue a new certificate without conducting a comprehensive inspection. Should the renewal application show new rotorcraft, the rotorcraft's records must be checked by an airworthiness inspector for compliance with the airworthiness requirements of part 133 before the certificate may be renewed.

B. Amendment. The CHDO generally processes amendments to a part 133 operator's certificate. The FAA may also amend an external-load operator's certificate, in the interest of safety in air commerce, as the result of actions taken under Title 49 of the United States Code (49 U.S.C.), section 44709 (formerly section 609 of the Federal Aviation Act of 1958), as amended, and 14 CFR part 13.

(1) Amendments may be made to any of the following:

(a) OpSpecs: additional authorization, no longer qualified for authorization.

(b) Rotorcraft Load Combination Flight Manual: a change in procedures, add a class of operation.

(c) Certificate: add or delete class authorization, a change to the rotorcraft list attached to the certification, a change of name (not ownership).

(d) Training program: a change in equipment (winch, aircraft, or other lifting device) or type of operations, including change in type of winch.

(2) An operator desiring to amend a rotorcraft external-load certificate must apply using the appropriate section of FAA Form 8710-4.

(3) The inspector determines if the amendment requires any additional inspections and/or tests.

(4) External-load operators seldom confine their operations to one geographic area. To prevent imposing undue hardship on industry, additional load class authorizations may be approved by a local Flight Standards District Office (FSDO) that does not hold the certificate. However, the local FSDO shall coordinate this activity with the CHDO. The local FSDO issues the qualified operator a letter of authorization (LOA) that notes all the requirements have been met for the particular load class authorization sought. The LOA or a facsimile must be carried on board the aircraft along with copies of the original external-load certificate and the list of authorized rotorcraft. The local FSDO forwards a copy of the LOA, approved additions to the Rotorcraft Load Combination Flight Manual, and completed original FAA Form 8710-4 to the CHDO. The certificate can then be amended to include the additional load class authorization. The amended certificate must be sent to the operator within 60 days because the LOA expires 60 days after the date of issuance. The expiration date should be stated in the LOA.

(5) To add or delete a rotorcraft from the list of approved rotorcraft, the operator should fill out the appropriate section on FAA Form 8710-4. The addition or deletion of a rotorcraft must be reflected in the OpSpecs, when applicable. The Rotorcraft Load Combination Flight Manual for that aircraft must be amended to reflect the change.

(a) The inspector assigned to the operator must ensure that all necessary inspections are performed.

(b) The FSDO issues a new list of approved rotorcraft. The operator must return the original and all facsimiles of the superseded list of approved rotorcraft to the FSDO for disposal. A new certificate is not issued unless the addition or deletion of rotorcraft also means a change in the load class authorizations.

(6) If the application, additional documents, and demonstrations indicate compliance with the appropriate regulations, an amended certificate and/or list of approved rotorcraft will be issued.

C. Cancellation. The Administrator may amend, suspend or revoke an external-load operator's certificate under 49 U.S.C. section 44709, as amended, and part 13.

(1) The certificate may be amended, suspended, or revoked for the same reasons that would have been cause for denying application of the original certificate. (See FAA Order 2150.3, Compliance and Enforcement Program, as amended.) The requirements for continuing to hold a certificate are never less than the requirements for original certification.

(2) An operator may elect to voluntarily discontinue operations. The operator must voluntarily surrender the operating certificate by letter. The letter should state that the operator understands that all initial certification requirements will have to be met in order to reapply. In any case, if the operator does not resume operations within 2 years, the operator shall surrender the operating certificate to the CHDO (14 CFR § 133.27(c)).

CHAPTER 97. CONDUCT INITIAL CERTIFICATION/RENEWAL OF A PART 133 OPERATOR

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE: 1202

2. OBJECTIVE. The objective of this task is to determine an applicant's ability to conduct operations under Title 14 of the Code of Federal Regulations (14 CFR) part 133. Successful completion of this task results in issuance of a part 133 operating certificate, Operations Specifications (OpSpecs) if appropriate, or the denial of a certificate.

3. GENERAL BACKGROUND. This chapter gives guidelines for certification and renewal of rotorcraft external-load operators. Part 133 prescribes rules governing the operation of rotorcraft (specifically helicopters) in operations involving loads that are carried outside the aircraft fuselage.

A. Authority. Amendments to the original part 133 greatly increase the scope of activity permitted under the regulations. For the sake of clarity, the new regulations are outlined below and will be developed in-depth at appropriate points in this chapter.

B. Certification Process. The certification process consists of five phases: Pre-application, Formal Application, Document Compliance, Demonstration and Inspection, and Certification. The complexity of the certification process is determined by the applicant's proposed operation (see volume 1, chapter 4).

C. Eligibility. During initial contact with an applicant who is seeking an external-load operating certificate, it must be determined if the proposed operation is applicable to part 133. In making this determination, the following eligibility requirements must be met.

(1) For a minimum of 6 months, the applicant must have the exclusive use of at least one aircraft that is properly certificated and equipped and meets all airworthiness requirements for the appropriate class of rotorcraft external-load operations. An aircraft of foreign registry cannot be used in part 133 operations; the external-load operating certificate is considered an airworthiness certificate (14 CFR part 133, § 133.51), and cannot be issued to an aircraft with other than U.S. registry. The exception is foreign registered aircraft operated under the provisions of the North American Free Trade Agreement (NAFTA).

(2) The applicant must have the services of a chief pilot who holds at least a commercial pilot certificate with a rotorcraft category, helicopter class and, if appropriate, a type rating or an appropriate letter of authorization (LOA).

D. Flight Standards District Office (FSDO) Working File. This file will form the basis for the eventual operator file if certification is successful, or will provide information justifying denial of the certificate. It is important that this file is kept up to date with any forms, correspondence, etc., to and from the applicant.

E. Recordkeeping. The operator is required to maintain records for the inspector's use to determine compliance with the regulations. The operator is required to maintain training and currency records for the pilots and the chief pilot of an operation. For further details, see volume 2, chapters 100 and 101.

4. PREAPPLICATION PHASE. In the case of rotorcraft external-load operations, the inspector has some discretion in deciding whether to hold a pre-application meeting. Because very long distances between the operation site and the FSDO occur frequently, the inspector may decide to brief an applicant by phone call and/or correspondence. See volume 1, chapter 4 and volume 2, chapter 97, section 2 for guidance and procedures for the pre-application meeting.

5. FORMAL APPLICATION PHASE. A formal application meeting is generally held after the application package is received and informally reviewed. If the application needs revision, the inspector should be prepared to discuss in detail all items that need correction or revision.

6. DOCUMENT COMPLIANCE PHASE.

A. Document Review. In addition to the application, the specific documents that must be submitted

during the document compliance phase for a part 133 certification include:

(1) the rotorcraft lease, if appropriate;

(2) two copies of the Rotorcraft Load Combination Flight Manual;

(3) evidence that the chief pilot meets the requirements of 14 CFR § 133.21;

(4) evidence that pilots meet instrument qualifications and currency for instrument flight rules (IFR) operations, if proposed;

(5) the proposed OpSpecs, if applicable; and

(6) the Class D training programs, including initial and recurrent training, if applicable.

B. Establish Exclusive Use of at Least One Rotorcraft. A permanent registration certificate (not a temporary certificate) or information from the aircraft registration data bank is acceptable as proof of ownership for the purpose of 14 CFR § 133.19. An agreement is required when the certificate holder does not own at least one rotorcraft that is certificated for external-load operations. Occasionally, the person who owns the aircraft also owns the corporation that is applying for the operating certificate. In such cases, the applicant and the person owning the aircraft are not considered the same entity. Therefore, an agreement is necessary.

(1) Any lease agreement furnished must identify the rotorcraft by type, registration number, and manufacturer's identification number.

(2) The wording of the agreement must show that the certificate holder has sole possession, control, and use of the aircraft for flight. Further, the agreement must indicate the person or entity who is responsible for ensuring that necessary maintenance is scheduled and performed.

(3) The agreement must provide for at least 6 consecutive months of exclusive use with no escape clause. There is no requirement that the lease have 6 months remaining at the time of certificate issuance or renewal.

(4) If unable to determine exclusive use of the rotorcraft, the inspector obtains a copy of the lease and sends it to the appropriate Regional Council through the regional Flight Standards division for evaluation.

C. Rotorcraft Load Combination Flight Manual. The applicant is required to prepare a manual that describes characteristics of the rotorcraft used so the maximum safety of working conditions during an external-load operation can be achieved. The requirements prescribed in part 133 and subparts G in both 14 CFR parts 27 and 29 are described in volume 2, chapter 98.

D. Testing and Currency Requirements. If the applicant cannot produce evidence that all pilots meet the appropriate regulatory requirements, knowledge and skill tests should be conducted during the demonstration and inspection phase. The chief pilot may test other pilots once the chief pilot meets the requirements of 14 CFR § 133.21. Logbook entries, including those showing external-load operating experience, and previous letters of endorsement are acceptable forms of evidence to indicate compliance with 14 CFR §§ 133.21, 133.23, 133.37, and 14 CFR part 61, § 61.57(e).

E. Operation Specifications. Standardized OpSpecs are available for operators certificated under part 133 and may be issued for all classes of operations if so desired. For Class D and/or IFR authorizations, OpSpecs will be issued to outline the operations that a certificate holder is allowed to conduct, to supplement the operating rules, and to contain limitations that are not specifically covered in the regulations. Inspectors must carefully evaluate OpSpecs to ensure that they are not used as a regulatory device.

F. Class D Training Program. Section 133.37(b) states that operators may not use crewmembers or other operations personnel for a Class D external-load operation unless they have successfully completed either an approved initial or recurrent training program. The training program must be submitted for Federal Aviation Administration (FAA) approval when an applicant is initially certificated for Class D or adding a Class D authorization. A person who has performed a Class D external-load operation within the past 12 calendar months does not need to undergo recurrent training. Although possibly self-trained, the chief pilot for Class D operations must have completed the training program for initial certification.

G. Airworthiness. Airworthiness inspectors must examine the following documents:

(1) the rotorcraft maintenance records;

(2) the records to show FAA approval of the attaching means;

(3) the airworthiness and registration certificates;

(4) the approved rotorcraft flight manual; and

(5) the records to show engineering approval of the personnel lifting device (Class D only).

7. DEMONSTRATION AND INSPECTION PHASE.

A. Knowledge and Skill Test. The chief pilot designated by the applicant must pass a knowledge and skill test administered by the FAA inspector. The test must cover the subjects prescribed in 14 CFR § 133.23. A detailed description of the chief pilot tests are found in volume 2, chapter 100. Subsequent knowledge and skill tests administered to other pilots employed by the operator are usually given by the chief pilot but may be given by an FAA inspector.

B. Operational Flight Check. If the external-load operator cannot provide a reliable record of having transported a similar load previously, 14 CFR § 133.33 operating rules require the operator to demonstrate by an operational flight check, the ability to transport an external-load in a safe manner. The term "differs substantially from any... previously carried" is to be defined by the inspector, using the examples provided as a guide. These flight tests are conducted while the inspector observes from the ground.

(1) An example of Class B loads that do not differ substantially from each other would be an air conditioner and electrical transformers. These loads are not considered substantially different because both are non-aerodynamic.

(2) An example of two loads that differ substantially would be an air conditioner and a large pane of glass. These loads are substantially different because the pane of glass can be aerodynamic under certain conditions. The inspector should follow 14 CFR § 133.41(c)(1) through (6) to the extent deemed appropriate and necessary for a particular load combination.

C. Single Pilot Operation From the Left Pilot Station. Most rotorcraft are certified to be flown from the right pilot station seat. As some operators prefer to fly from the left pilot station during external-load operations, they have modified their aircraft to permit such operation. Regardless of the pilot station location, the pilot must have an adequate field of view and access to the controls and cockpit displays required for safe operation, including the execution of emergency procedures. For a pilot to conduct single pilot operations from the left seat of a rotorcraft certified for right seat operation, the aircraft may be modified to provide a pilot in the left seat access to all necessary controls and displays, which include the load release mechanisms. FAA approval of these modifications may be obtained from an Aircraft Certification Office (ACO) through the Supplemental Type Certificate process, or from a FSDO through the field approval process. Either process requires both an FAA evaluation of the modified rotorcraft and ACO approval of the Flight Manual Supplement.

8. CERTIFICATION PHASE.

A. Airworthiness Certification. Upon fulfillment of all requirements of part 133, an applicant is eligible for a rotorcraft external-load operator certificate. This certificate becomes a current and valid airworthiness certificate for each normal or transport category rotorcraft listed in a letter accompanying the certificate. Including incidental operations, this applies only when the rotorcraft is operated under part 133. The Rotorcraft External-Load Operating Certificate and List of Approved Rotorcraft must be carried aboard the rotorcraft.

B. Restricted Category Rotorcraft. Rotorcraft that are certificated in the restricted category for the special purpose of external-load operations under 14 CFR part 21, § 21.25(b)(7), are issued restricted category airworthiness certificates for the purpose of conducting external-load operations. Therefore, these aircraft do not need to be listed on the List of Approved Rotorcraft that accompanies the Rotorcraft External-Load Operator Certificate. The Restricted Category Airworthiness Certificate must be carried aboard the restricted category rotorcraft.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of part 133 regulatory requirements and FAA policies, qualification as an aviation safety inspector (operations), and experience as a rotorcraft external-load pilot.

B. Coordination. This task requires coordination with the airworthiness unit and with the Aviation Data Systems Branch, AFS-620.

2. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- Title 14 CFR parts 1, 27 (subpart G), 29 (subpart G), 61, 91, and 133
- Advisory Circular (AC) 133-1, Rotorcraft External-Load Operations in Accordance with FAR Part 133 (current edition)
- PTRS Procedures Manual (PPM)

B. Forms.

- FAA Form 1360-33, Record of Visit, Conference, or Telephone Call
- FAA Form 8430-21, Operating Certificate (figure 97-1)
- FAA Form 8710-4, Rotorcraft External-Load Operator Certificate Application (figure 97-2)

C. Job Aids.

- Part 133 Certification Process Flow Chart (figure 97-3)
- Part 133 Certification Job Aid (figure 97-4)
- Sample letters and figures

3. PRE-APPLICATION PHASE PROCEDURES.

A. Initial Inquiry. Upon initial inquiry from an applicant, ask for the location of the principal base of operation. If the principal base of operation is in the jurisdiction of another FSDO, provide the applicant with the location and telephone number of that office. However, continue to give the applicant the information needed to begin certification.

B. Applicant Resources. Make sure the applicant is aware of the certification and operating requirements of part 133. If the applicant requests, provide copies of part 133 and AC 133-1. If there are any questions, explain:

(1) the general applicability and definition of terms;

(2) the certification requirements;

(3) the operating rules; and

(4) part 133 required records and reports.

C. Other Regulations. Advise the applicant that he/she is responsible for complying with other federal, state, and/or local regulations.

D. Special Considerations for Part 133. Discuss the following special considerations of part 133:

(1) the classes of operation sought;

(2) the requirements for IFR operations, including OpSpecs;

(3) the qualifications and experience required for chief pilot;

(4) the requirement for a Rotorcraft Load Combination Flight Manual; and

(5) the requirement for OpSpecs and a training program if a Class D or IFR authorization is sought.

E. Letter of Intent. Based on the size and scope of the operation, determine if a letter of intent (figure 97-5) is required. If no letter of intent is required, give the applicant three copies of FAA Form 8710-4 (two for the application; one for a "working copy").

F. PTRS. Open PTRS file.

G. FSDO Review of Letter of Intent. Within the time frame of the FSDO guidelines, review the letter of intent for completeness, accuracy, and acceptability.

(1) The letter of intent should contain the following:

(a) the specific classes for which the operator is applying;

(b) the company legal name including any doing business as (d/b/a), the principal operation base address, the mailing address, and phone numbers (the use of a post office box number as the only address of the principal base of operations is not acceptable unless it reflects the actual, physical location of the base);

(c) the type, make, model, and quantity of rotorcraft to be operated;

(d) the estimated date when operations will begin;

(e) the names and addresses of any management personnel and/or chief pilot; and

(f) three, 3-letter designators, in order of applicant's preference.

(2) Determine if the applicant meets the basic requirements for certification. If the applicant does not satisfy the basic requirements, discuss those specific areas that must be complied with before certification can begin.

H. Application.

(1) If the review of the letter of intent indicates that the applicant meets the basic requirements for a part 133 operation, give the applicant three copies of FAA Form 8710-4 (figure 97-2) and samples of the following materials, which are to be submitted with the application package:

(a) a copy of FAA Form 8400-8, Operation Specification and a sample of part 133 OpSpecs if applying for a Class D or an IFR authorization;

(b) a copy of the certification job aid (figure 97-4);

(c) a sample letter nominating a chief pilot (figure 97-6);

(d) a sample Rotorcraft-Load Combination Flight Manual (chapter 98, figure 98-1); and

(e) a sample schedule of events (figure 97-7).

(2) Discuss how to complete the forms.

(3) Advise the applicant to submit the forms in duplicate with original signatures.

(4) Explain the certification process, including the requirements for each phase.

I. Pre-application Meeting.

(1) Determine if a pre-application meeting is necessary based on the following considerations about the applicant:

(a) previous experience in part 133 external-load operations;

(b) the size, scope, and safety features of the operation;

(c) the area of operation;

(d) whether a Class D or an IFR authorization is sought; and

(e) the applicant's ability to comply with the requirements.

(2) If a pre-application meeting is not necessary, schedule a date and time for a formal application meeting.

(3) If a pre-application meeting is necessary, schedule a date and time. At the pre-application meeting discuss the following:

(a) the area of operation (local or across FSDO boundaries), including the location of principal base of operation, and the location of any probable satellite bases;

(b) the type of class loads the operator is seeking;

(c) the operator's previous experience with part 133 operations;

(d) the category and class of rotorcraft the operator will use;

(e) the qualifications and experience of the proposed chief pilot;

(f) the applicability of parts 91 and 133;

(g) AC 133-1, Rotorcraft External-Load Operations in Accordance with FAR Part 133;

(h) any previous or pending enforcement action on the operator;

(i) the purpose of the part 133 certification job aid and schedule of events;

(j) any questions about the contents or requirements of the Rotorcraft Load Combination Flight Manual; and

(k) the requirements for developing a training program for Class D operations.

(l) Discuss certification process in detail, including the requirements for:

- the formal application phase;
- the document compliance phase;
- the demonstration and inspection phase; and
- the certification phase.

J. FSDO Records. Inspectors should track all certificate action in the PTRS Activity Code 1202.

K. Establish a FSDO Working File. Include any correspondence, copies of documents, or forms developed before, during, and after certification.

L. Other FSDO Actions. In order to determine the applicant's and the pilots' enforcement history, follow office procedures to contact the Enforcement Information Subsystem (EIS) in Oklahoma City.

(1) If a certificate action indicates that the applicant cannot be certificated while an order is in effect, inform the applicant in writing (figure 97-8) that the applicant is not eligible for certification until the enforcement action is fulfilled.

(2) If a certificate action is in effect for the chief pilot designee, inform the applicant in writing (figure 97-9) that the pilot is not eligible to be chief pilot until the enforcement action is fulfilled. Continue with the certification process only when another chief pilot designee has been indicated clear through EIS.

(3) If a certificate action is in effect for any of the other pilots (other than chief pilot) employed by the applicant, continue with the certification process. Inform the applicant that the pilot in question will not be eligible to conduct external-load operations until the terms of the enforcement action have been satisfied.

(4) Place the EIS output in the working file.

M. Terminating the Pre-application Phase. Begin the formal application phase with the receipt of the application package.

4. FORMAL APPLICATION PROCEDURES. Review the application package and determine whether it is of sufficient quality to proceed with certification within the time frame of FSDO guidelines.

A. Application Review. Review FAA Form 8710-4 and the other documents in the package to determine whether they are of sufficient quality to continue with certification. Examine the documents in-depth during the document compliance phase. (An example of a properly completed application is shown in figure 97-2.)

B. Application not Accurate or Complete. If the application package is not complete or accurate, notify the applicant in writing (figure 97-10) of the changes needed before certification can continue.

C. Need for Formal Application Meeting. Determine if the optional formal application meeting is necessary.

(1) If a formal application meeting is not necessary, schedule the certification inspection of the principal base of operations. With the applicant participating, review the procedures required during the demonstration and inspection phase.

(2) If a formal application meeting is necessary, schedule a date and time.

D. Formal Application Meeting.

(1) Discuss the acceptability of the application package.

(2) Review the proposed schedule of events, and make any necessary adjustments.

(3) Review the specific requirements appropriate to each class of authorization.

(4) Discuss the requirements for the Rotorcraft Load Combination Flight Manual.

(5) Review the requirements for the Class D training program.

(6) Discuss the preparation of OpSpecs for Class D and/or IFR.

(7) Discuss the rotorcraft ownership or lease agreement.

(8) Review the applicant's previous experience in external-load operations.

(9) Review the experience and qualifications of the designated chief pilot.

(10) Discuss any discrepancies in the application package and the proper corrective actions.

E. Coordinate with Airworthiness Unit.

(1) Notify airworthiness that a maintenance inspector must review the maintenance records during this phase.

(2) During the demonstration and inspection phase, coordinate with the airworthiness unit when inspecting the installation and operation of the external-load attaching means.

(3) Notify the airworthiness unit that the personnel lifting device for Class D operations must be approved during the demonstration and inspection phase.

F. Terminating the Formal Application Phase. Accept the formal application package in writing (figure 97-11). Begin the document compliance phase by conducting an in-depth review of all required documents.

5. DOCUMENT COMPLIANCE PROCEDURES. After accepting the application package, evaluate the information in the following documents.

A. The Application Form (FAA Form 8710-4).

(1) In Block 1, the applicant indicates one of the following three choices:

(a) Original Issuance if the application is for initial certification;

(b) Amendment if the application is for a change to an existing certificate; or

(c) Renewal if the application is for renewal of an existing certificate.

(2) In Block 1, the applicant also indicates the certificate number if the application is for amendment or renewal. The applicant must also indicate the load classes sought. "Class D" may be typed into the appropriate block.

(3) In Block 2, the applicant indicates the name (including d/b/a's), mailing address, and telephone number of the operator.

(4) In Block 3, the applicant indicates the address and telephone number of the principal base of operations. Check to ensure that the applicant has not used a post office box number for the principal base's address.

(5) In Block 4, the applicant indicates the name of the designated chief pilot and that pilot's airman certificate grade and number.

(6) In Block 5, the applicant indicates all rotorcraft to be used by registration number, make and model, and load class. The applicant must also indicate whether the attaching device for each rotorcraft has been previously approved. The applicant may use the Remarks column to indicate the rotorcraft to be used in Class D or IFR operations.

(7) At the bottom of the form, the applicant must date and sign the application. The person signing the application must also include their title (for example, Director of Operations, President.)

(8) The reverse side of the form is for later FAA use.

B. Rotorcraft Lease.

(1) Review the rotorcraft lease for the following:

(a) the name of owners;

(b) the name of certificate holder/applicant;

(c) the identification and type of aircraft;

(d) the duration of lease;

(e) an indication of sole possession, control, and use for flight, including an agreement for performance of required maintenance;

(f) the signatures of the owners and certificate holder or applicant; and

(g) the dates of the signatures.

(2) Determine whether the operator has the exclusive use of at least one rotorcraft for a minimum of 6 consecutive months.

C. Rotorcraft Load Combination Flight Manual. See volume 2, chapter 98.

D. Letter of Designation of Chief Pilot. Verify that the chief pilot has been nominated, and has accepted the designation, then verify that both the operator and chief pilot have signed the letter.

E. Qualifications of Chief Pilot. Determine if the chief pilot designee meets the requirements of 14 CFR § 133.21, has passed the knowledge and skill test for external-load operations, has previous experience in external-load operations, and has a satisfactory safety record. If it is necessary to administer a knowledge and skill test for the chief pilot, conduct it during the demonstration and inspection phase.

F. Operation Specifications. See volume 2, chapter 99. (Class D or IFR authorizations only)

G. Rotorcraft and Equipment Maintenance Records. (Airworthiness)

H. Training Program. Examine Class D training programs for the following elements.

(1) For pilot crewmembers, initial and recurrent ground training should include the following:

(a) reviewing contents of the OpSpecs;

(b) calculating weight and balance, including longitudinal and lateral weight and balance;

(c) determining single engine hovering out-of-ground effect performance considering weight and density altitude;

(d) reviewing normal and emergency communications procedures, including hand signals;

(e) reviewing crew coordination procedures;

(f) reviewing preflight procedures for all equipment;

(g) reviewing congested area plan requirements;

(h) briefing all persons involved with the external-load operation;

(i) using approved personnel lifting devices;

(j) operating the winch, including weight, longitudinal and lateral center of gravity (CG), and operational limitations, preflight, and normal and emergency procedures;

(k) avoiding collisions and obstacles;

(l) reviewing other information necessary to ensure pilot competence. For example, for each aircraft make and model used, examine the training program for information about the following:

i. the major aircraft systems;

ii. the limitations of the aircraft make and model;

iii. the performance characteristics;

iv. the fuel consumption;

v. the approved aircraft flight manual, approved Rotorcraft Load Combination Flight Manual, and approved supplements;

vi. the procedures for normal and emergency situations;

vii. explanations of the causes of loss of tail rotor effectiveness and procedures to recover; and

viii. the avoidance of potentially hazardous meteorological conditions.

(2) For pilots, initial flight training while carrying a ballast to simulate persons on the personnel lifting devices should include the following:

(a) computing weight and balance, including longitudinal and lateral CG calculations, and performance planning;

(b) executing takeoffs and landings;

(c) maintaining directional control while hovering;

(d) accelerating from a hover;

(e) executing approaches to landing or work areas;

(f) operating the winch, if so equipped;

(g) using safety devices that prevent inadvertent release of the load;

(h) releasing the load in an emergency;

(i) single engine hovering and maneuvering for landing; and

(j) avoiding collisions and obstacles.

(3) For flight crewmembers (for example, winch operators) initial ground training should include the following:

(a) reviewing normal and emergency communications procedures, including hand signals;

(b) operating the winch, including weight and operational limitations, preflight, and normal and emergency procedures;

(c) the appropriate portions of the Rotorcraft Load Combination Flight Manual;

(d) reviewing crew coordination procedures;

(e) taking a preflight of lifting equipment;

(f) using the approved personnel lifting devices;

(g) using personal safety equipment, such as harnesses, clothing, gloves, etc.;

(h) recognizing the onset of hazardous load oscillations;

(i) recognizing other dangerous situations; and

(j) avoiding collisions and obstacles.

(4) For flight crewmembers (for example, winch operators), initial flight training while carrying a simulated load (ballast) should include the following:

(a) operating the winch, if so equipped;

(b) communicating among crewmembers, including hand signals as well as normal and emergency communications procedures;

(c) using safety devices that prevent inadvertent release of the load;

(d) releasing the load in an emergency;

(e) using the approved personnel lifting device;

(f) using personal safety equipment, such as harnesses, clothing, and gloves;

(g) stabilizing oscillating winch loads; and

(h) avoiding collisions and obstacles.

(5) For ground crew personnel, initial ground and flight training while carrying a simulated load should include:

(a) reviewing normal and emergency communications procedures, including hand signals;

(b) reviewing crew coordination procedures;

(c) making a preflight of the lifting equipment;

(d) using the approved personnel lifting device;

(e) operating the winch, including limitations and normal and emergency procedures;

(f) the appropriate portions of the Rotorcraft Load Combination Flight Manual;

(g) recognizing dangerous situations;

(h) recognizing the onset of hazardous oscillation of the load; and

(i) using personal safety equipment, such as helmets, gloves, and goggles.

I. Unsatisfactory Items. If there are any unsatisfactory items, advise the applicant in writing that the items must be corrected (figure 97-12).

(1) Minor corrections may be made in the office without returning the entire package. For substantial corrections, place a reasonable time limit on when the corrections should be completed.

(2) Place a copy of the letter in the file.

J. Terminating the Document Compliance Phase. When all documents are satisfactory, conclude the document compliance phase. Proceed with the demonstration and inspection phase.

6. DEMONSTRATION AND INSPECTION PROCEDURES.

A. Conduct Knowledge and Skill Tests. See volume 2, chapter 100.

B. Conduct Rotorcraft and Equipment Inspection (Airworthiness).

C. Conduct Operational Flight Checks (if required).

(1) Have the operator determine if the weight of the rotorcraft-load combination and the location of it's CG are within approved limits, the external-load is securely fastened, and whether the external-load interferes with devices provided for its emergency release.

(2) Observe an initial lift-off to verify that controllability is satisfactory.

(3) Have the pilot execute a 360 degree pedal turn (to the right or left, as appropriate) to verify that directional control is satisfactory while the rotorcraft is hovering.

(4) Verify that no attitude is encountered in forward flight in which the rotorcraft is uncontrollable or hazardous aerodynamic turbulence occurs. Check that hazardous oscillations of the external-load do not occur. This may be verified by other ground personnel for the inspector.

(5) Have the pilot increase forward speed to determine if directional stability is maintained as both the aircraft and external-load accelerate.

(6) If appropriate, have the pilot maintain horizontal flight at the maximum speed for which authorization is requested; observe whether load oscillations occur that would interfere with aircraft stability.

(7) For Classes B, C, and D, observe normal operation of the lifting device during flight or hovering to ensure that it does not interfere with flight control.

(8) Have the pilot maneuver the external-load into its release position and execute the release for appropriate load classes. Note any difficulties or discrepancies in the proper positioning of the load and the aircraft exit from the site.

(9) Make notes during and immediately after the operational flight check for later placement in the office file and to refer to, before debriefing the applicant.

D. Conduct a Base Inspection. See volume 2, chapter 101.

E. Results of Inspections and Testing.

(1) If any demonstrations are unsatisfactory, advise the applicant in writing (figure 97-13) of areas that need corrective action. Reschedule the inspections or tests, as appropriate.

(2) If all demonstrations are satisfactory, proceed with certification.

F. Terminating the Demonstration and Inspection Phase. When all demonstrations and inspections are complete and satisfactory, proceed with the certification phase.

7. CERTIFICATION PROCEDURES. When all certification requirements have been met, call AVN-120 for a certificate number. Complete inspection reports and job aids. Have the administrative staff prepare the operating certificate.

A. Prepare and Issue the Operating Certificate. Use FAA Form 8430-21 for an operating certificate (figure 97-1). The following information must be typed on the certificate.

(1) Enter the full legal name of the company below the words, "This certifies that." Show other

names (such as d/b/a's) on the certificate. If necessary, list them on a separate, attached letter (figure 97-14).

(2) Enter the address of the principal base of operations below the full legal name. Do not use a post office box address unless it also reflects the physical location of the principal base of operations.

(3) Do not modify the preprinted certification statement of authority. Complete the statement by typing "ROTORCRAFT EXTERNAL-LOAD OPERATIONS" in the space provided.

(4) Directly adjacent to the words, ". . . regulations, and standards," indicate all load classes for which the operator is authorized. If Class D or IFR operations are authorized, type in the phrase, "and the terms, conditions, and limitations contained in the approved OpSpecs. Class [*all loads the operator is approved for*] loads are authorized." Type in the phrase "valid only for the rotorcraft on the attached list."

(5) Include the expiration date, which is the last day of the 24th calendar month after the date of issue.

(6) Enter the certificate number (see volume 2, chapter 203).

(7) Enter the date all requirements for certification are met. State the reissue date, if appropriate.

(8) Type the four character alphanumeric designator and the city and state of the certificate holding district office into the space provided (for example, WP03, San Francisco, CA).

(9) Enter the full title of the person signing the certificate. Enter the acronym of the region and the FSDO acronym and number (for example, Manager, AWP-FSDO-03).

(10) Submit the certificate for the FSDO manager to sign.

B. List of Authorized Rotorcraft. Prepare a list of authorized rotorcraft (figure 97-15) and attach to the operating certificate. A change in the list of authorized rotorcraft will not require a reissue of the operating certificate unless there is a change in authorized operating classes caused by addition or deletion of a particular rotorcraft to the list.

C. Application Completion. On the reverse side of FAA Form 8710-4, complete the inspection report.

(1) Approve each suitable rotorcraft by the following:

(a) the make and model;

(b) the registration number;

(c) the approval date;

(d) the load class (A, B, C, or D);

(e) the weight authorization;

(f) any limitations and remarks; and

(g) the inspector's signature.

(2) Include any pertinent remarks.

(3) Indicate how the chief pilot met the knowledge and skill requirements (i.e., actual test or previous logbook endorsement). In addition:

(a) indicate the chief pilot's name;

(b) indicate the load classes the chief pilot is authorized for (type in Class D, if appropriate); and

(c) indicate the date the chief pilot met the knowledge and skill requirements.

(4) Sign the application or have it signed by the inspector who tested or verified the chief pilot's experiences.

(5) Indicate the authorized load classes (type in Class D, if appropriate).

(6) Include the certificate number after obtaining it from AFS-600.

(7) Indicate the date the certificate was issued.

(8) Enter the FSDO acronym.

(9) Have the certification project manager approve and sign the application.

D. Certificate Denial. If certification requirements are still not met, issue a letter of denial (figure 97-16). Indicate disapproval on FAA Form 8710-4, make any necessary comments, and have the FSDO manager sign and date the application.

E. Certification File. Upon issuance of a certificate, assemble a file that contains the following:

(1) a copy of the letter of intent, if applicable;

(2) a copy of the application;

(3) a copy of the certification job aid;

(4) the schedule of events;

(5) a copy of the operating certificate and approved list of rotorcraft;

(6) a copy of the Rotorcraft Load Combination Flight Manual;

(7) a copy of the letter designating chief pilot;

(8) a summary of any difficulty encountered during certification and its resolution;

(9) the approved copies of the OpSpecs and of the training program for Class D; and

(10) a copy of the approved OpSpecs for IFR.

F. Vital Information Subsystem. Enter all appropriate information in the Vital Information Subsystem Air Operator Basic File and Air Operator Aircraft Auxiliary File (see volume 2, chapter 205).

G. Flight Standards District Office Working File. Establish an official FSDO working file on the operator, which consists of:

(1) the Enforcement Information Subsystem/ Accident Incident Data Subsystem profile on the applicant and personnel, including a negative report, if applicable;

(2) the surveillance reports;

(3) all general correspondence relevant to the operator;

(4) a copy of the knowledge, skills, and ability test or results, as appropriate;

(5) current working documents;

(6) current approved congested area plan; and

(7) amendment and revision authorization letter.

H. PTRS. Make final PTRS work entry for this task.

8. TASK OUTCOMES. Completion of this task results in one or more of the following.

A. Issuance of OpSpecs authorizing operations under part 133.

B. Issuance of an operating certificate for Class D and/or IFR operations, if appropriate.

C. Written notification to the applicant denying the application, with indication of the return of all original documents to the applicant.

D. A letter to the applicant confirming termination of the certification process per the applicant's request.

9. FUTURE ACTIVITIES.

A. Possible review of a congested area plan.

B. Surveillance scheduled and conducted according to national guidelines and as congested area plans are received.

C. Renewal conducted every 24 calendar months.

D. Possible amendment of the certificate at request of the operator.

FIGURE 97-1
FAA FORM 8430-21, OPERATING CERTIFICATE

US Department of Transportation
Federal Aviation Administration

Operating Certificate

This certifies that

MID-CONTINENTAL HELICOPTER, INC.
d/b/a
Verti-Flite
1234 Avalon Avenue
San Francisco, CA 95123

has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed therein, for the issuance of this certificate and is authorized to operate as an Air Operator and conduct

Rotorcraft External-Load Operations

in accordance with said Act and the rules, regulations, and standards; and the terms, conditions, and limitations contained in the approved operations specifications. Classes A, B, C, and D loads are authorized.

This certificate is not transferable and, unless canceled, suspended, superseded, surrendered or revoked, shall continue in effect until March 31, 1997.

By Direction of the Administrator

Certificate number: RWI-L-001-A

Effective Date: March 10, 1995

Issued at: WP03, San Francisco, CA

(Signature)

Manager, AWP-FSDO-03
(Title)

FAA Form 8430-21 (6-87)

FIGURE 97-2
FAA FORM 8710-4, ROTORCRAFT EXTERNAL-LOAD OPERATOR CERTIFICATE APPLICATION

Form Approved: OMB No. 2120-0044

US Department of Transportation
Federal Aviation Administration

Rotorcraft External-Load Operator Certificate Application

INSTRUCTIONS: *Submit this form in triplicate to local FAA District Office*

1. APPLICATION FOR *(CHECK APPLICABLE BOX)*	CERTIFICATE NO. *(For amendment or renewal only.)*	EXTERNAL - LOAD CLASS AUTHORIZATION (S)
☒ ORIGINAL ISSUANCE ☐ AMENDMENT ☐ RENEWAL		☐ A ☐ B ☒ C

2. NAME AND ADDRESS OF APPLICANT *(Include Zip Code)*	3. PRINCIPAL OR LOCAL BASE OF OPERATIONS *(Airport, City, State, and Zip Code)*
Gery L. Ezell 858 Westview Lane Pine Tree, GA 31087	Gery L. Ezell 858 Westview Lane Pine Tree, GA 31087
TELEPHONE NUMBER (404) 555-1234	TELEPHONE NUMBER (404) 555-1234

4. NAME OF CHIEF PILOT OR PILOT IN CHARGE OF LOCAL OPERATION	AIRMAN CERTIFICATE	GRADE	NUMBER
Charles Antony Berg		ATP	123456789

5. **ROTORCRAFT TO BE USED**

REGISTRATION NUMBER	TYPE		LOAD CLASS (X)			ATTACH PREV DEVICE APPD.		REMARKS
	MAKE	MODEL	A	B	C	YES	NO	
N123VF	Bell	206		X	X	Yes		

CERTIFICATION

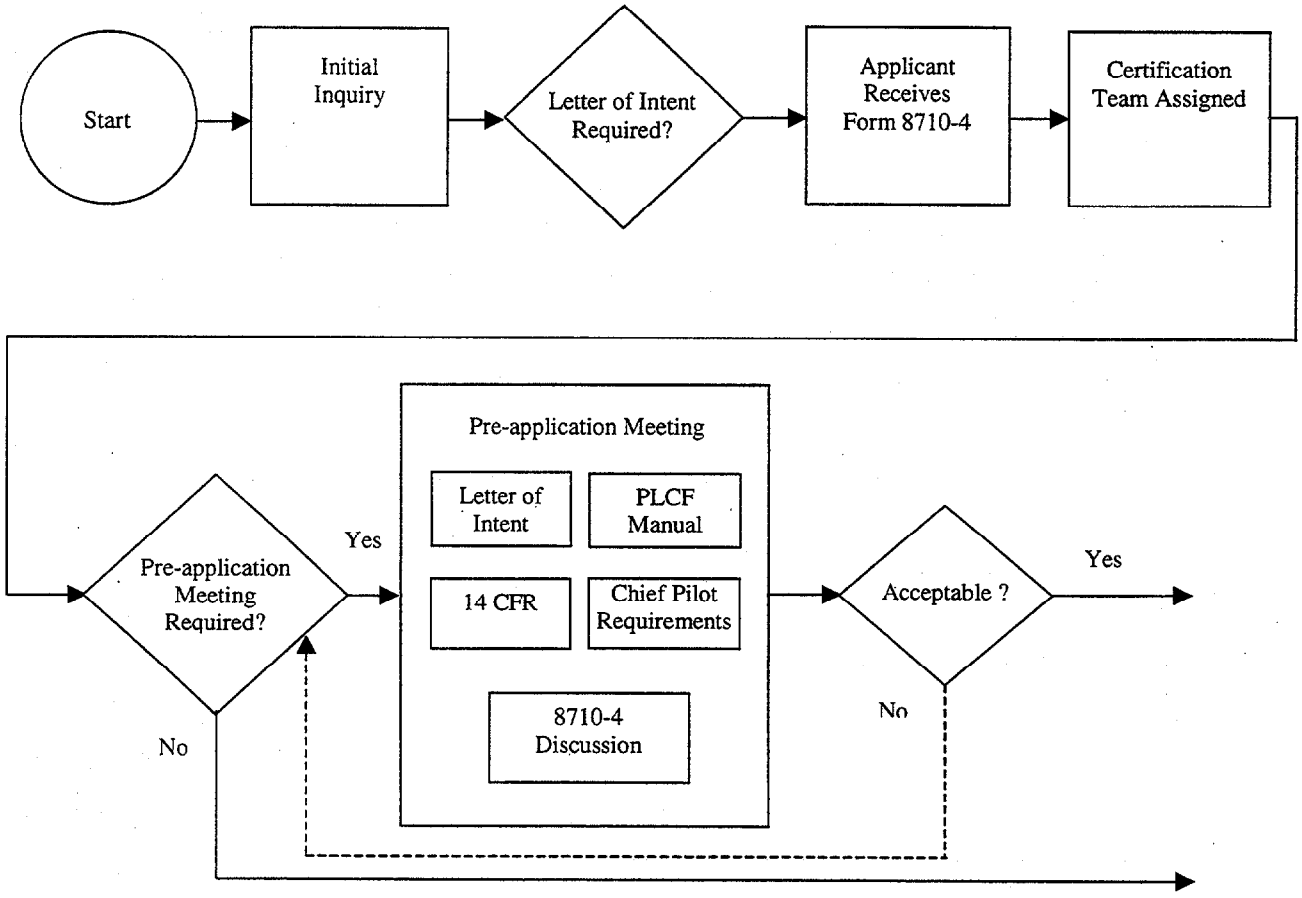
I certify that the statements made on this application form and any attachments are true and correct, and that the operations indicated on this application will be conducted within the requirements of the Federal Aviation Act of 1958 and the applicable Federal Aviation Regulations.

DATE	TITLE OF AUTHORIZED OFFICER	SIGNATURE OF APPLICANT OR AUTHORIZED OFFICER
03/10/1996	President	Gery L. Ezell

FAA Form 8710-4 (6-84) SUPERSEDES FAA FORM 8420-7 and FAA FORM 8000-32 AFS Electronic Forms System - JetForm FormFlow - 12/1998

FIGURE 97-3
PART 133 CERTIFICATION PROCESS FLOW CHART

APPLICATION PHASE



Continued on Next Page

FIGURE 97-3
PART 133 CERTIFICATION PROCESS FLOW CHART - Continued

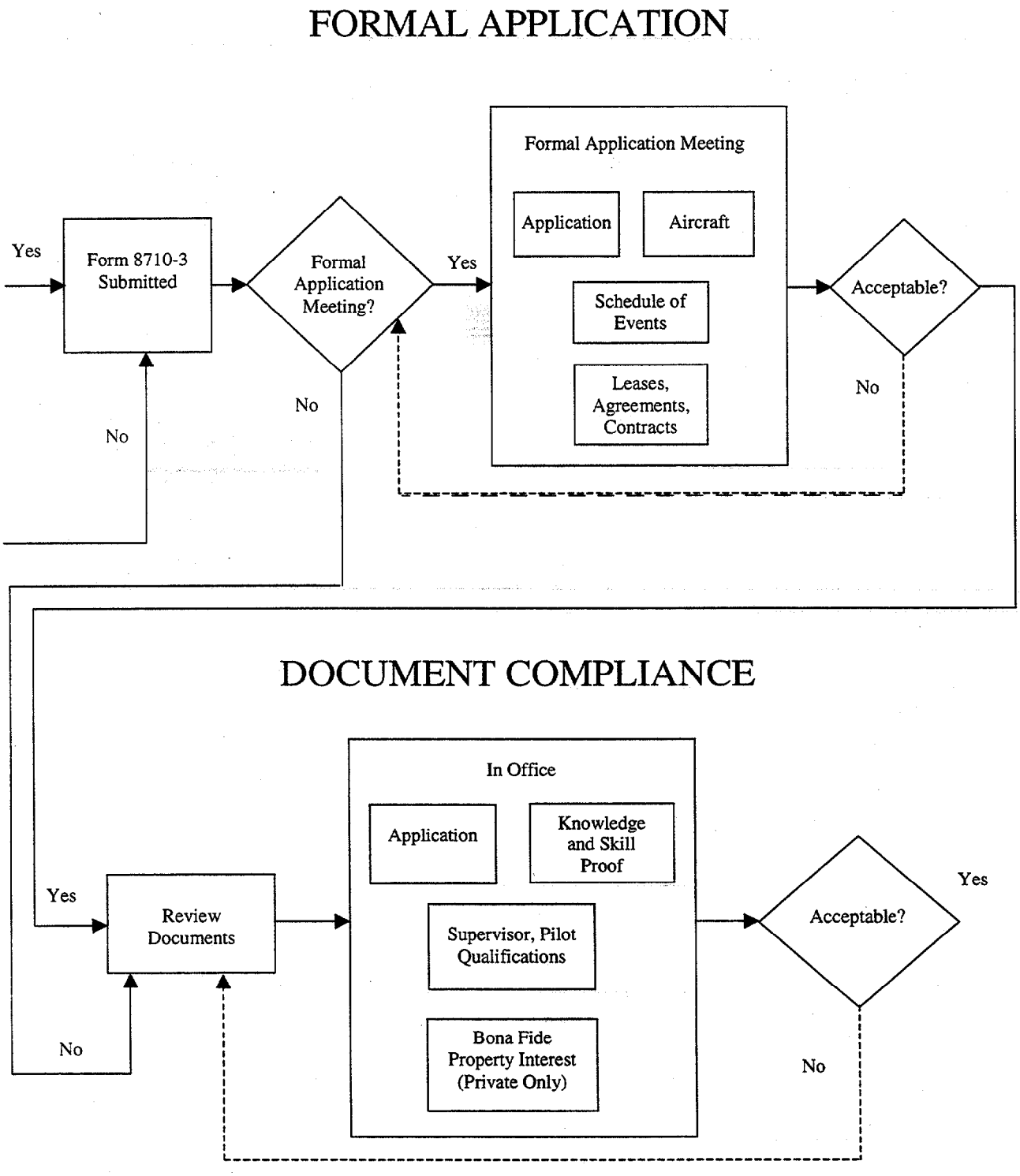


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FIGURE 97-3
PART 133 CERTIFICATION PROCESS FLOW CHART - Continued

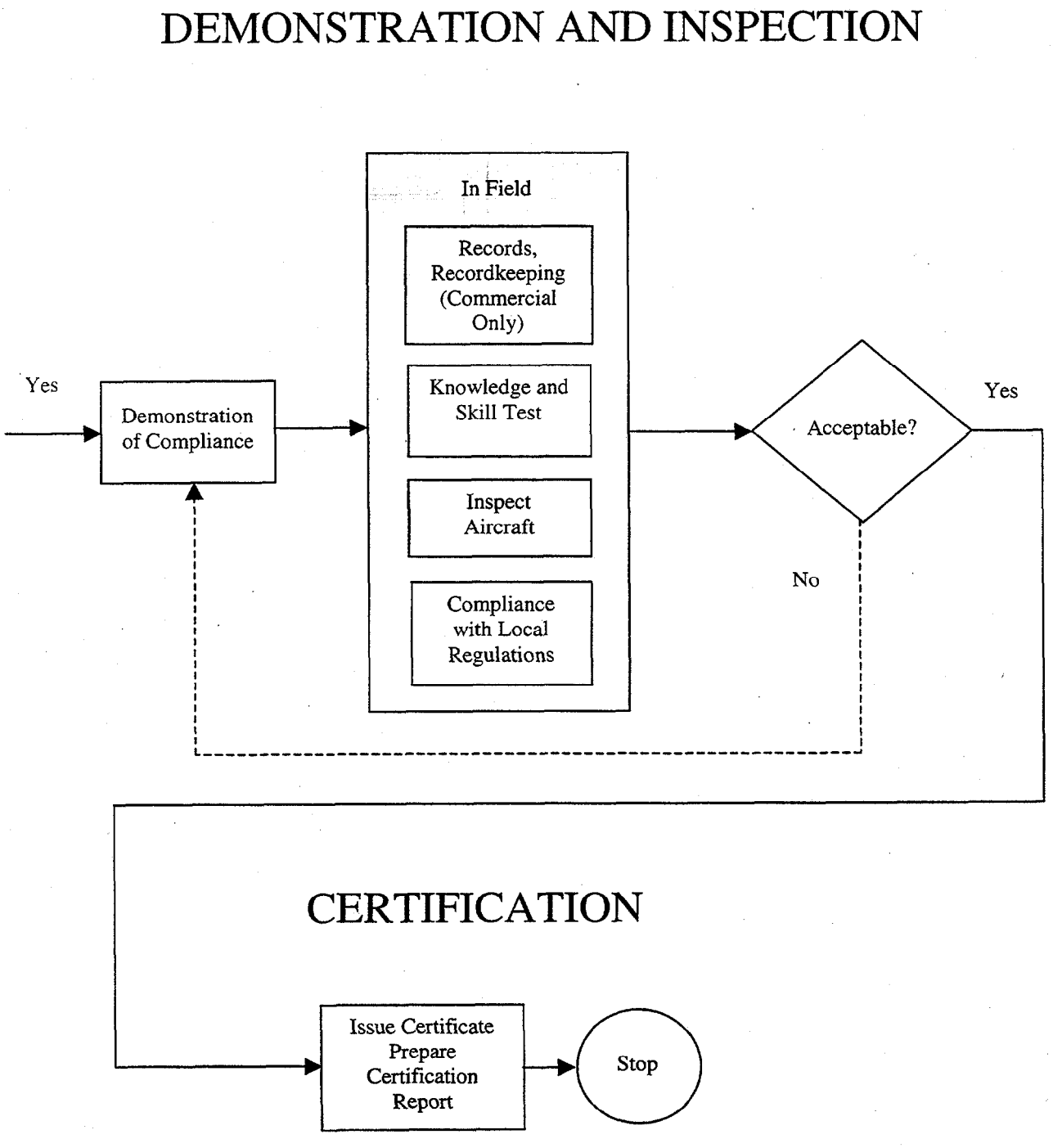

FIGURE 97-4
PART 133 CERTIFICATION JOB AID

14 CFR PART 133 INITIAL CERTIFICATION CERTIFICATION TEAM DESIGNATED Name / Specialty _____ (Certification Project Manager) _____ _____ _____ _____ _____	NAME OF APPLICANT REMARKS:				
	Inspector's Initials	Date	S	U	N/A
1. Initial contact with _____					
2. Applicant given copy of Advisory Circular (AC) 133-1					
3. Applicant advised how to obtain pertinent regulations					
4. Letter of Intent submitted					
5. Letter of Intent reviewed and accepted					
6. Preapplication Meeting					
7. Formal Application Package received and accepted					
8. Formal Application Meeting					
9. Formal Application Package reviewed in depth					
a. FAA Form 8710-4					
b. Schedule of events					
c. Rotorcraft-Load Combination Flight Manual (RLCFM)					
d. Class D training program					
e. Operations specifications (OpSpecs)					

FIGURE 97-4—Continued
PART 133 CERTIFICATION JOB AID

14 CFR PART 133 INITIAL CERTIFICATION REMARKS:	NAME OF APPLICANT				
	Inspector's Initials	Date	S	U	N/A
f. Rotorcraft ownership/lease					
g. Experience/qualifications of chief pilot & other pilots					
10. Aircraft					
a. Equipped for A loads					
b. Equipped for Class B/C loads					
c. Equipped for Class D loads					
• Personal lifting device					
d. Section 133.39(a) placard					
e. Section 133.49(b) marking adjacent to load carrying device					
• States maximum load					
• Matches RLCFM					
f. Inspections					
• Installation & function load carrying/attach device					
• Maintenance records					
g. Minimum Equipment List (MEL) for multiengine aircraft					

FIGURE 97-4—Continued
PART 133 CERTIFICATION JOB AID

14 CFR PART 133 INITIAL CERTIFICATION REMARKS:	NAME OF APPLICANT Inspector's Initials	Date	S	U	N/A
11. Class D Authorization					
a. OpSpecs					
b. Use of FAA-approved PLD					
c. Use of grd. flt. crew comm. equipment					
d. Communications equipment inspected by Avionics					
e. Initial/Recurrent training programs					
12. IFR Authorization					
a. OpSpecs					
b. At least one pilot current & qualified for IFR flt. in helicopters					
c. At least one rotorcraft certificated for IFR flight					
13. Pilots					
a. Chief pilot appropriately qualified					
b. All pilots passed knowledge test					
c. All pilots passed skill test					
14. Applicant understanding of section 133.45 Operating Limit					

FIGURE 97-4—Continued
PART 133 CERTIFICATION JOB AID

14 CFR PART 133 INITIAL CERTIFICATION	NAME OF APPLICANT				
REMARKS:	Inspector's Initials	Date	S	U	N/A
a. Passenger carrying during external-load operations					
b. Weight & balance limits					
c. Operating airspeed limits					
d. Restricted category rotorcraft over densely populated areas, congested areas, near busy airports where passenger carrying operations are conducted					
15. Certificate number obtained from AFS-620					
16. External-load Operator Certificate Prepared/ Issued					
17. Certification report & district office file prepared					
18. Surveillance plan established					
ADDITIONAL REMARKS:					

FIGURE 97-5
SAMPLE LETTER OF INTENT

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

October 13, 1996

Federal Aviation Administration
Flight Standards District Office 67
3420 Norman Berry Dr.
Atlanta, GA 30354

Dear Inspectors:

This notifies you of our intent to become a rotorcraft external-load operator under Title 14 of the Code of Federal Regulations (14 CFR), part 133.

We plan to commence operation on April 10, 1997, and will be ready for certification inspection of our facility and equipment by March 15. Our application is for Class B, C, and D loads and IFR operations using one Bell 47, one Bell 206, and two Boeing-Vertol BV-234 helicopters.

Our principal operation base is located at 585 Westview Lane, Pine Tree, GA 31087. Our business phone number is (404) 555-1212. Mr. Brian Morgan is our chief pilot and may be reached at the above address.

Enclosed are three copies of FAA Form 8710-4. Our requested 3-letter certificate designators are RWI, RPT and RGA, in that order of preference.

Sincerely,

Stephen Burkholder
Chairman

FIGURE 97-6
LETTER OF NOMINATION FOR DESIGNATION AS A CHIEF PILOT

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

October 13, 1996

Federal Aviation Administration
Flight Standards District Office 67
3420 Norman Berry Dr.
Atlanta, GA 30354

Dear Inspectors:

I am writing to inform you that, as part of our application for an external-load operating certificate, I wish to designate the following person as chief pilot, with your approval:

Elizabeth Sheley

Ms. Sheley has accumulated over 2000 hours as pilot-in-command (PIC) of rotorcraft and most recently was employed as an external-load pilot for the Public Utilities Commission. In this capacity, she flew Bell 206 and Sikorsky S-65 series helicopters. Ms. Sheley completed the state and FAA knowledge and skill tests on June 9, 1995. All records of experience and training are available for your review.

Sincerely,

Stephen Burkholder
Chairman

I accept this nomination for designation as chief pilot.

[*signature*]

_____

[*type name of chief pilot*]

FIGURE 97-7
SAMPLE SCHEDULE OF EVENTS

14 CFR PART 133 SCHEDULE OF EVENTS					
NAME OF OPERATOR ADDRESS	NAMES OF MANAGEMENT PERSONNEL Names _____ Titles _____ (Certification Project Manager) _____ _____ _____ _____				
	Inspector's Initials	Date	S	U	N/A
PRE-APPLICATION					
Letter of Intent					
FORMAL APPLICATION					
Schedule of Events					
Application (FAA Form 8710-4)					
DOCUMENT COMPLIANCE PHASE					
Applicant (FAA Form 8710-4)					
Rotorcraft-Load Combination Flight Manual (RLCFM)					
Letter of Designation of Chief Pilot					
Qualifications of Chief Pilot					
Operations Specifications (OpSpecs) (Class D & IFR Authorizations Only)					
Rotorcraft & Equipment Maintenance Records					
Class D Training Programs					
DEMONSTRATION AND INSPECTION					
Knowledge and Skill Test					
Rotorcraft & Equipment Inspection (Airworthiness)					
Operational Flight Checks (if required)					
Base Inspection					
REMARKS:					

FIGURE 97-8
LETTER INDICATING APPLICANT NOT ELIGIBLE FOR CERTIFICATION BECAUSE OF PENDING ENFORCEMENT ACTION

FAA Letterhead

[*date*]

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

Dear Mr. Burkholder:

This letter is to inform you that you are ineligible for certification as a rotorcraft external-load operator.

During precertification review of enforcement history, it was determined that [*type of enforcement action and justification for discontinuing certification process*].

If you have any questions concerning this matter or desire to reapply once the enforcement sanction has been fulfilled, please contact this office at [*telephone number*].

Sincerely,

[*FSDO manager's signature*]

FIGURE 97-9
LETTER INDICATING CHIEF PILOT DESIGNEE NOT ELIGIBLE BECAUSE OF PENDING ENFORCEMENT ACTION

FAA Letterhead

[*date*]

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

Dear Mr. Burkholder:

This letter is to inform you that your nominee for chief pilot, Ms. Elizabeth Sheley, is not eligible for the position.

During precertification review, it was determined that enforcement action is in effect against Ms. Sheley's airman certificate.

If you have any questions concerning this matter or desire to submit another nominee for chief pilot, please contact this office at [*telephone number*].

Sincerely,

[*FSDO manager's signature*]

FIGURE 97-10
LETTER REJECTING APPLICATION PACKAGE

FAA Letterhead

[*date*]

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

Dear Mr. Burkholder:

This letter is to inform you that the application package submitted to become a rotorcraft external-load operator is not acceptable. The following is a list of discrepancies noted:

- *List the specific items found in each document.*
- *List any items or documents that are missing.*

All items in the application package are returned with this letter. Additionally, blank forms [*application, etc.* are also enclosed if you intend to submit a corrected application package. If you intend to terminate the certification process or if you have any questions, please contact this office at [*telephone number*].

Sincerely,

[*FSDO manager's signature*]

FIGURE 97-11
LETTER ACCEPTING FORMAL APPLICATION PACKAGE

FAA Letterhead

[*date*]

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

Dear Mr. Burkholder:

This letter is to inform you that your application for a rotorcraft external-load operating certificate has been accepted for review.

The next step in the certification process is to review the following:

- *List the documents, as appropriate to the applicant.*

  Application Form 8710-4, Application for Rotorcraft External-Load Operating Certificate
  Lease Agreements
  Rotorcraft-Load Combination Flight Manual
  Letter of Designation of Chief Pilot
  Qualifications of Chief Pilot
  Operations Specifications (OpSpecs)
  Rotorcraft and Equipment Maintenance Records
  Training Programs

You will be notified of the results of this review and any further actions required.

Sincerely,

[*CPM's signature*]

FIGURE 97-12
LETTER EXPLAINING DOCUMENT DEFICIENCIES

FAA Letterhead

[*date*]

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

Dear Mr. Burkholder:

During the document compliance phase of certification, the following items were found deficient and are being returned for correction:

- *List the specific items and discrepancy, for example:*

1. FAA Form 8710-4, Application for Rotorcraft External-Load Operating Certificate, should indicate the registration numbers of the aircraft to be used.
2. The Class D training program does not include any training on appropriate hand signals to be used by ground personnel in the event of radio communication failure.

If you have any questions concerning this matter, please contact this office at [*telephone number*].

Sincerely,

[*principal operations inspector's (POI) signature*]

FIGURE 97-13
LETTER EXPLAINING INSPECTION DEFICIENCIES

FAA Letterhead

[*date*]

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

Dear Mr. Burkholder:

During the [*type of inspection, i.e. rotorcraft equipment, operational flight check, base inspection*] the following deficiencies were noted:

- *List specific deficiencies.*

It will be necessary to correct these items before the certification process can continue. You should inform this office when you anticipate completing these corrections so that the schedule of events for certification may be adjusted.

Sincerely,

[*CPM's signature*]

FIGURE 97-14
LETTER LISTING D/B/A'S

Rotor Whirl, Incorporated
858 Westview Lane
Pine Tree, GA 31087

[*date*]

Federal Aviation Administration
Flight Standards District Office 67
3420 Norman Berry Dr.
Atlanta, GA 30354

Dear Inspectors:

The following corporate names (d/b/a) may be associated with external-load operations authorized upon certification of Rotor Whirl, Incorporated:

Burkholder & Associates
59206 Mill Run Rd.
Bowie, MD 20716

Sincerely,

Stephen Burkholder

FIGURE 97-15
LIST OF AUTHORIZED ROTORCRAFT

FAA Letterhead

[*date*]

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

Dear Mr. Burkholder:

This letter authorizes the following rotorcraft to be operated in accordance with Title 14 of the Code of Federal Regulations (14 CFR), part 133, and the provisions and limitations of the attached operating certificate:

- *List each helicopter by make, N-number and external-load class, for example:*

Bell 206	N1478A	Class A,B
Bell 222	N1479A	Class B, C & D

Sincerely,

[*POI's signature*]

FIGURE 97-16
LETTER DENYING CERTIFICATION

FAA Letterhead

[*date*]

Rotor Whirl, Incorporated
585 Westview Lane
Pine Tree, GA 31087

Dear Mr. Burkholder:

This letter is to inform you that your applicant for an external-load operating certificate is denied.

The reasons for denial are as follows:

- *List specific reasons in detail.*
- *Cite 14 CFR sections where possible.*

If you have any questions concerning the above, please contact this office at [*telephone number*].

Sincerely,

[*FSDO manager's signature*]

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CHAPTER 98. EVALUATE A ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL (RLCFM)

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

- For initial certification: 1302
- Revisions: 1303

2. OBJECTIVE. The objective of this task is to ensure that an operator's RLCFM meets regulatory requirements and provides adequate procedures and guidance for safely conducting external-load operations. Successful completion of this task results in the approval of an RLCFM as part of a package of documents required for initial certification, the addition of a specific class of authorization, or the disapproval of an RLCFM.

3. GENERAL.

A. Authority. The operator is required by Title 14 of the Code of Federal Regulations (14 CFR) part 133, § 133.47 to develop an RLCFM as part of the application package for certification of rotorcraft external-load operations.

(1) Title 14 CFR § 133.47 DOES NOT apply to restricted category aircraft. Restricted category aircraft certificated under 14 CFR part 21, § 21.25(a) or (b) do not require a RLCFM.

(2) Title 14 CFR § 133.47(a) requires the RLCFM to include the operating limitations, procedures, performance, and other information established under this subpart of 14 CFR. This also includes the information established during operational flight checks performed under 14 CFR § 133.41.

(3) Limitations, procedures, performance, and other information not included in the approved rotorcraft flight manual (RFM) must be placed in the RLCFM (see volume 2, chapter 97).

B. Content. Instructions and specifications for the contents of the RLCFM are outlined in subpart G of 14 CFR parts 27 and 29, and 14 CFR §§ 133.41, 133.43, 133.45, and 133.47. Subpart G requires that operating limitations and other information necessary for safe operation be established and made available to the crewmembers. This is done in the form of the RLCFM.

C. Purpose. The RLCFM is prepared in order to impart the information necessary for the safe carriage of external-loads.

D. Developing an RLCFM for Each Situation. The applicant is required to develop an RLCFM for each rotorcraft, except for restricted category aircraft. The RLCFM must cover each class of external-load operation that will be conducted with a specific rotorcraft.

(1) An RLCFM must be prepared for each rotorcraft, even if some makes and models are similar. The manufacturer's calculation of performance data and operating limitations may be unique for each rotorcraft.

(2) If the operator wishes to add or delete a load class, the RLCFM must be revised accordingly to reflect the safety considerations.

E. Initiation. The applicant for a part 133 External-Load Operating Certificate must submit two copies of an RLCFM for approval. The RLCFM must be prepared in conformance to subpart G of either part 27 (Airworthiness Standards: Normal Category Rotorcraft) or part 29 (Airworthiness Standards: Transport Category Rotorcraft). Part 21 does not require an RLCFM for restricted category rotorcraft.

F. Operator Briefing. The inspector usually advises an operator on how to prepare the RLCFM. The sample RLCFM (figure 98-1) can be used as a guide for the operator. The operator should describe the step-by-step actions personnel shall perform to ensure compliance with the regulation. The operator may be briefed informally during a telephone conversation, or the inspector may schedule a pre-application meeting. (For guidelines see volume 2, chapter 97.)

4. ISSUES AND GUIDELINES FOR PREPARING THE RLCFM.

A. An Acceptable Level of Report. An RLCFM is complete and acceptable if it reports all of the items enumerated in section 2 of this chapter, fulfills the

requirements of subpart G of 14 CFR part 27 or 29, and contains complete and accurate figures.

B. Determine Authorized Weights. The following methods are provided for the inspector to assess how maximum authorized weights are determined:

(1) The maximum external-load weight is determined by the inspector for each load class for which approval is requested. That maximum weight, which is recorded in the "weight authorized" column on the reverse of FAA Form 8710-4, Application for Rotorcraft External-Load Operating Certificate, reflects the attaching means maximum weight capacity.

(2) Some aircraft are authorized to operate at weights above the normal maximum gross weight when the excess weight is carried on the cargo hook. These higher weights are described in the RFM or RFM supplement. Sometimes an aircraft may have other approved special equipment installed that lowers or raises the maximum attaching means weight. The "limitations and remarks" column of the inspector report (reverse side of FAA Form 8710-4) should reflect any information concerning a maximum weight limit or a special equipment installation the inspector may wish to enter.

(3) There are many other factors that affect the maximum weight that an aircraft could carry. Each of these should be clearly delineated within the operator's RLCFM. Each operator should develop procedures to guide their pilots in calculating the various factors that affect aircraft performance. Maximum weights based on aircraft structural limitations are not the only limiting factor. Some other considerations are aircraft empty weight, fuel required for operation, fuel reserve, crew weight, density altitude, and one engine inoperative performance (Class D). The RLCFM should discuss each of the factors and describe how the pilot applies them to each external-load operation.

(4) An example of one way to calculate weight is shown in Table 1.

C. Center of Gravity (CG) Considerations. The RLCFM should contain information for use by the pilot in determining both the longitudinal and the lateral CG.

TABLE 1

Maximum gross weight	_____
	minus
Aircraft empty weight	_____
	minus
Fuel required for operation	_____
	minus
20 minute fuel reserve	_____
	minus
Pilot weight	_____
	equals
Maximum authorized weight (not to exceed maximum gross weight or maximum attaching means weight)	_____

(1) The RLCFM must contain information for calculating longitudinal and lateral CG (when lateral information is available) for each class of external-load authorized, or reference the RFM for this information.

(2) The list of maximum airspeeds and weights for each load class demonstrated in operational flight checks must be included in the RLCFM. If these were not accomplished before the RLCFM was written, return the document after the flight checks, and have the operator put the list in the RLCFM.

5. REVISIONS. RLCFM revisions must be approved by an inspector before they are printed and distributed. Revisions must also conform to regulatory requirements. If a printed and distributed RLCFM revision does not conform to the appropriate regulations, the Operations Specifications (OpSpecs), or the operating certificate, the inspector should immediately notify the operator in writing, requesting appropriate action to resolve the problems (figure 98-2). For subsequent revisions to the RLCFM, the inspector is required to sign only the record of revisions, the table of contents, and the revised pages.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of part 133 regulatory requirements and FAA policies, qualification as an Aviation Safety Inspector (ASI) Operations, and experience as an external-load pilot.

B. Coordination. This task requires coordination with the airworthiness unit.

2. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- parts 1, 27, 29, 91, and 133
- Approved RFM
- Advisory Circular (AC) 133-1, Rotorcraft External-Load Operations in Accordance with 14 CFR Part 133 (current edition)
- AC 91-32, Safety In and Around Helicopters (current edition)
- AC 91-23, Pilot's Weight and Balance Handbook (current edition)
- AC 91-42, Hazards of Rotating Propeller and Helicopter Rotor Blades (current edition)
- PTRS Procedures Manual (PPM)

B. Forms.

- None

C. Job Aids.

- Sample RLCFM
- Sample letters and figures

3. PROCEDURES.

A. Brief the Applicant. Advise the operator to develop a document describing the procedures to be used to comply with the requirements outlined in section 2, paragraph 3C. Inform the applicant that the RLCFM must be an approved document that may be prepared with the advice of the inspector.

B. PTRS. Open PTRS file.

C. RLCFM Contents. Review the RLCFM for completeness of content and accuracy of the figures. Refer to 14 CFR §§ 133.41, 133.43, 133.45, and 133.47 for a list of requirements that the RLCFM must meet. (A sample RLCFM is found in figure 98-1.)

(1) The RLCFM should state the operating limitations, normal and emergency procedures, performance, and other such information from subpart G of either part 27 or 29, whichever is applicable.

(2) Title 14 CFR § 133.47(b) requires the RLCFM to set forth the Classes (A, B, C, D) for which airworthiness of the rotorcraft has been demonstrated.

(3) The RLCFM must include a section that gives the following information:

(a) information on any peculiarities discovered when operating with particular rotorcraft load combinations;

(b) precautionary advice about static electricity discharges for Class B and D loads;

(c) procedures for computation of lateral and longitudinal CG, if not adequately described in the RFM (the applicant usually must compute the lateral CG for each class, when lateral information is available); and

(d) any other information considered essential for safe operation which external-loads should be included.

(4) The RLCFM must have a list of the maximum airspeeds and weights that were demonstrated while performing operational flight checks conducted by the manufacturer or the operator.

D. Results of RLCFM Evaluation.

(1) If the RLCFM is satisfactory, the certification project manager (for an initial certification) or the principal operations inspector (POI) (for an existing operator) approves the RLCFM as per volume 1, chapter 4, section 2 . Return the original to the operator, and keep a copy for the file.

(2) If the RLCFM is unsatisfactory, notify the operator in writing, indicating the areas of deficiency (figure 98-2).

(a) Return the RLCFM for correction.

(b) Keep a copy of the letter sent to the operator in the file until the corrected RLCFM is returned.

E. Revisions. Inform the applicant that to revise the RLCFM, the applicant sends the original of the revi-

sion, one copy of the revision, and a new page control sheet to the inspector.

(1) Evaluate the revision as per original RLCFM approval.

(2) Approve or reject the revision as per original RLCFM approval.

F. PTRS. Close PTRS file.

4. TASK OUTCOMES. Completion of this task results in either of the following:

A. An approved RLCFM or an approved revision.

B. A letter indicating that the RLCFM is not approved.

5. FUTURE ACTIVITIES. Possible review of revisions to the RLCFM.

FIGURE 98-1
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

[Date submitted for approval]

THIS SAMPLE RLCFM SHOULD BE MODIFIED TO REFLECT LIMITATIONS AND PROCEDURES APPLICABLE TO A SPECIFIC EXTERNAL-LOAD OPERATOR AND THE SPECIFIC AIRCRAFT AND LOAD CLASSES FOR WHICH APPROVAL IS GIVEN.

Rotorcraft Registration Number: N

Rotorcraft Make and Model:

FAA Approved [date]

[POI's signature] [FSDO]

FIGURE 98-1—Continued

SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

CONTENTS

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

SECTION 1. OPERATING LIMITATIONS

In addition to the operating limitations set forth in the approved Rotorcraft Flight Manual (RFM), this aircraft will be operated in accordance with the following operating limitations:

1. No person shall operate this aircraft with an external-load unless that person holds an FAA External-Load Operator Certificate and has a letter of competency or an entry in his or her logbook as required by 14 CFR § 133.37(a)(2). A copy of letter of competency or the knowledge and skill test logbook endorsement must be in that person's possession during the operation.

2. No person who is not a required crewmember may be carried aboard the aircraft unless that person performs an essential function in connection with the external-load operation. When the aircraft used requires a hoist operator, the air crewmember must wear an approved hoist operator's safety harness while not seated with a seat belt fastened.

3. Operations shall not be conducted over congested areas unless approved by the FAA FSDO in accordance with a congested area plan (CAP) developed in compliance with 14 CFR § 133.33(d)(1) and (2). (See sample plan in Appendix 1 of this manual.)

4. No person may serve as a pilot of this aircraft during external-load operations, unless that person has passed the knowledge and skill tests required by 14 CFR § 133.23 for the class of operation being conducted.

5. A copy of the External-Load Operating Certificate and RLCFM will be on this aircraft during all external-load operations.

6. The total weight of this aircraft and load combination shall not exceed:

Make and model _____ N-number _____

Class A load max weight _____ # not to exceed mgw _____

Maximum forward airspeed _____ knots (kts.) Other _____

NOTE: Maximum load figure as derived using a _ pound pilot weight and _ pounds of fuel.

Make and model _____ N-number _____

Class B load max weight _____ # not to exceed mgw _____

Maximum forward airspeed _____ knots (kts.) Other _____

NOTE: Extreme caution must be exercised when carrying Class B extemal-loads, as controllability may be affected by the size and shape of the cargo.

NOTE: These maximum load figures were derived using a _ pound pilot weight and _ pounds of fuel.

Make and model _____ N-nurnber _____

Class C load max weight _____ # not to exceed mgw _____

Maximum forward airspeed _____ knots (kts.) Other _____

NOTE: These maximum load figures were derived using a _ pound pilot weight and _ pounds of fuel.

7. The location of the center of gravity for this aircraft and load combination shall be within the center of gravity range established during type certification under part 27 or 44 GFR -29 or special purpose certification of the aircraft.

8. Other limitations deemed necessary by the operator or contained in the approved flight manual or its supplements.

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

SECTION 2. LOAD-COMBINATION INFORMATION

1. The operator will list information pertaining to the peculiarities of the load combination, such as the following:

a. oscillating tendencies

b. ground effect

c. density altitude

d. strong or gusty winds

e. abrupt control movements

f. acceleration limitation

g. maximum Class A lateral load imbalance

h. lateral CG calculation procedure

2. NORMAL. Inspect the cargo sling or basket for proper installation and overall condition. Check the load to make sure it is rigged properly and safely. For Class B and C loads, check the electrical release and the manual release on the ground before flight. Arm the circuit by pushing the cargo release circuit breaker **in**.

This is an example of information that may be applicable to some types of cargo attach devices: Lift the cargo load to a hover, then check the remaining power to determine if there is enough to carry the load safely. While hovering, verify that directional control is adequate. When moving into horizontal flight, use smooth, slow control movements to minimize settling and to prevent the load from swinging. In climbing forward flights, check for hazardous oscillations of the external-load. When approaching a landing area with a load, identify the delivery point, come in slowly, into the wind, at the shallowest possible angle to ensure that the load clears all obstructions safely. Start bringing in power early to slow your descent and forward airspeed, ending in a hover short of the release point and in view of any ground crew personnel. Follow ground signal instructions to hover over the release point. Place the load on the ground without any movement of the load. When the helicopter is stabilized over the load and has slack in the sling, open the cargo hook by normal means.

In the event of electrical failure, use the manual release to drop the cargo load. If any difficulties arise during the flight that warrant an emergency landing, release the load immediately. If for some reason the load will not release, do not drag the load on the ground before touchdown. This may cause the aircraft to nose over with inadequate aft cyclic control to compensate.

3. Information regarding static electricity discharge: Before attaching the cargo hook to the load, make sure the aircraft has been grounded to dissipate charges of static electricity that may have built up during flight.

4. The operator will list any other information essential for safe operation, such as:

a. precautions to avoid high tension wires,

b. lightning (Class C loads),

c. radio communications procedures,

d. crossing over main highways, and

e. procedures for the placement of cargo at delivery may vary according to a specific operation class.

5. All personnel engaged in the external-load operation will be familiar with and use the hand signals found on page _ of this manual. (List the procedures used to ensure familiarity.)

6. Class A external-load securing procedures: Use the company procedure to make precautionary landings in the event the securing devices become disconnected or loose.

7. Fuel burnoff and how it may affect the center of gravity en route.

8. Required placards:

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

a. A placard for the maximum external-load will be marked on each side of the fuselage near the external-load hook or basket if a Class A load.

b. An instrument panel placard will be installed describing load class approval and passenger occupancy limitations.

9. Class B Cargo Hookup: After the helicopter has been directed into position, one ground crewmember should remain within sight of the pilot to give positive direction with hand signals, or remain in direct radio contact with the pilot, while an appropriate number of other crewmembers attend to the cargo hookup. All hookups made to the helicopter while it is in a hover should be hastened to minimize the time the hookup personnel spend underneath the helicopter. If a hookup is to be performed without the aid of a ground guide and without using direct visual operational contact, an air crewmember should lie prone on the floor and look downward from the main entrance doorway where the actions of the ground crewmembers can be observed; the pilot can be directed by this crewmember on the inter phone. Crewmembers should wear approved safety harnesses when not seated with seat belts fastened.

10. Hand Signals: When giving hand signals to the pilot, a ground crewmember must stand in front of and to the pilot's side of the helicopter, within sight of the pilot. See figure 98-1 of this manual for hand signals.

11. Class D Authorization - Carriage of Persons: All Class D operations will be conducted using only FAA-approved personnel lifting devices. Each operation will be conducted with a minimum of two crewmembers on board the helicopter. Intercom communication will be maintained between the pilot and other crewmember. This second crewmember must be able to advise the pilot of the status of the lift device and be able to release the empty device should it become necessary. This release must require two separate and distinct actions: arm the system; depress the release button. Where possible, a third person associated with the lift will be in position on the surface and communicating by radio with the pilot. This person's purpose is to advise the pilot of any safety related item and to supervise the loading or unloading of the personnel lifting device. Further, this person should ensure that the maximum weight appropriate for this operation, as determined by the pilot, is not exceeded.

The operating limitations as set forth in section 1 and the load combination information contained in section 2 are the conditions under which I will conduct this rotorcraft external-load combination operation.

_____

Operator's signature

SECTION 3. INFORMATION

All personnel associated with an external-load operation should be familiar with the following information.

1. GENERAL. People have been injured, sometimes fatally, in helicopter accidents that would not have occurred had they been informed of the proper method of boarding or deplaning. Properly briefed non-flight personnel should never be endangered by a spinning tail rotor. The simplest method of avoiding accidents of this sort is to have the rotors stopped before non-flight personnel are boarded or allowed to depart. Because this action is not always practicable and because of the unique capabilities of the helicopter, it is often necessary to board personnel while the rotors are turning. Therefore, to avoid accidents, it is essential that all persons associated with helicopter operations be made aware of all possible hazards and instructed in how to avoid them.

2. FLIGHT AND NON-FLIGHT CREW PERSONNEL. Persons directly involved with boarding or deplaning personnel, aircraft servicing, rigging or hooking up of external-loads, etc., should be thoroughly instructed in their duties. It would be difficult, if not impossible, to cover each type of crew training related to the safe operation of helicopters; however, some areas that should be covered are as follows:

a. Ramp attendants and aircraft servicing personnel should be instructed in their specific duties and how to accomplish them safely. This includes the following:

(1) Keeping persons scheduled to board and unauthorized persons away from the helicopter landing and takeoff areas.

(2) Briefing boarding personnel on the best way to approach and board a helicopter whose rotors are turning.

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

b. Proper procedures for aircraft servicing include the following:

(1) The helicopter rotor blades should be stopped and both the aircraft and the refueling unit properly grounded before any refueling operation. The pilot should ensure that the proper grade of fuel and any required additives are used.

(2) Refueling the aircraft while the blades are turning. Rapid refueling" may be practical for certain types of operation. However, this can be hazardous when safe procedures are not followed. Pilots should remain at the flight controls during fueling; refueling personnel should be knowledgeable about proper refueling procedures and properly briefed for specific makes and models of aircraft.

(3) Refueling units should be positioned to ensure adequate rotor blade clearance; persons not involved with the refueling operation should be kept clear of the area.

(4) Smoking must be prohibited in and around the aircraft during all refueling operations.

c. External-load rigger training is possibly one of the most difficult and continually changing aspects of the helicopter external-load operation. A poorly rigged cargo net, light standard, or load pallet could result in a serious, costly accident. It is imperative that all riggers be thoroughly trained to meet the needs of each external-load operation. Since rigging requirements may vary several times in a single day, proper training is of the utmost importance to safe operations.

d. Pilot at the flight controls.

(1) Many helicopter operators have been lured into a "quick turnaround" ground operation to avoid delays at airport terminals and to minimize stop/start cycles of the engine. As part of this quick turnaround, the pilot will leave the cockpit with the engine and rotors turning. Such an operation can be extremely hazardous if a gust of wind disturbs the rotor disc, or if the collective flight control moves causing lift to be generated by the rotor system. Either occurrence may cause the helicopter to roll or pitch resulting in a rotor blade striking the tailboom. or the ground.

(2) Safe operating procedures include pilots remaining at the flight controls whenever the engine is running and rotors are turning. This is especially important near passenger terminal areas. If the pilot finds it necessary to leave the controls of a running machine when in areas where people may be endangered, the pilot should:

(i) ensure that all controls are secured in accordance with the aircraft flight manual, and

(ii) reduce rotor and/or engine RPM to the minimum recommended settings.

e. External-load signalmen should know the following:

(1) The lifting capability of the helicopters involved. This knowledge is essential for some operators have models of helicopters that have almost identical physical characteristics but different lifting capabilities.

(2) The pilots. The safest plan would be to standardize procedures for pickup and release of sling loads. Without standardization, the hookup person would have to learn the technique used by each pilot. The hookup person should also insist on standardization of pilot techniques for any sort of emergency that may occur while personnel are beneath the helicopter.

(3) The cargo. Many items carried externally are very fragile. The hookup person should always know when a hazardous article is involved and the nature of the potential hazard. Explosives, radioactive materials, and toxic chemicals are examples of possible cargo. (49 CFR sections 172.101 and 172.102 contain the hazardous materials commodity lists.) In addition to knowing the nature of the cargo, hookup personnel should be familiar with the types of protective gear, clothing, and actions that are necessary for safe operation.

(4) The appropriate hand signals. When direct radio communications between ground and flight personnel are used, the specific meaning of hand signals should be assured before operations commence.

(5) Emergency procedures. Ground and flight personnel should fully agree to and understand all necessary actions to be taken by all concerned in the event of emergency. This prior planning is essential in avoiding injuries when emergencies do occur.

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

(6) All aspects of the external-load operation being conducted. The pilot conducting the external-load operation will complete a detailed briefing for all personnel, no matter how remotely involved in the operation, prior to starting the operation.

3. NONFLIGHT CREW PERSONNEL. All persons who board a helicopter while its rotors are turning must be instructed in the safest means of doing so. If at the controls, the pilot may not be able to conduct a boarding briefing. Therefore, the individual who arranged for the personnel to be carried or the individual assigned as a ramp attendant should accomplish this. The exact procedures may vary slightly from one model helicopter to another, but in general the following should suffice.

a. Boarding:

(1) Stay away from the rear of the helicopter.

(2) Crouch low before walking under the main rotor.

(3) Approach from the side or front but never out of the pilot's line of vision, and only when cleared by the pilot or ground personnel in contact with the pilot.

(4) Hold firmly to hats and loose articles.

(5) Never reach up for or run after a hat or other object that is blown away.

(6) Protect your eyes by shielding them with your hand or by squinting.

(7) If you are suddenly blinded by dust or a blowing object, stop, crouch lower, or sit down, and await help.

(8) Never grope or feel your way toward or away from a helicopter.

b. Since few helicopters carry flight attendants, the pre takeoff briefing must be made by the pilot. The type of operation will determine what sort of briefing is to be given, but personnel should always be briefed on the following.

(1) The use and operation of seatbelts for takeoff, en route, and landing. Emphasis should be placed on how to release the specific kind of seatbelt installed in the particular aircraft. Automotive type releases are not always used in helicopters; for instance, some belts use buckles that are rotated to open.

(2) The location and use of flotation gear and other survival equipment that might be on board; how and when to "abandon ship" if a ditching is necessary.

(3) For flights over rough or isolated terrain, all occupants should be told where maps and survival gear are located.

(4) Each person on board should be instructed in what actions and precautions to take during an emergency, and how and when to exit after landing in the event of an emergency. Ensure that passengers are aware of the location of fire extinguishers, pyrotechnic signaling devices, life preservers, and other survival equipment. Instructions on the location and methods of opening normal and emergency exits should be explained. A diagram or pictorial display on a passenger briefing card is encouraged.

(5) Smoking within 50 feet of an aircraft on the ground should be prohibited. Smoking while flying could be permitted, at the discretion of the pilot, except under the following conditions:

(i) during all ground operations;

(ii) immediately before, during, or after takeoff or landing; and

(iii) when carrying flammable or hazardous materials (49 CFR).

c. What passengers need to be told in a parenting briefing is determined by the conditions of the landing. For example, if on a hill, depart downhill. If this involves walking around the helicopter to avoid the area of lowest rotor clearance, always go around the front, never the rear. The diagrams included in AC 91-32, Safety in and Around Helicopters, could be adapted to a passenger briefing card.

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Appendix 1

CONGESTED AREA PLAN

(submit in duplicate)

Name, address, telephone number of Operator:

Name, address, telephone number of Contractor:

Rotorcraft Identification Number: N

Rotorcraft Make and Model (HU-369D, etc.):

Rotorcraft Airworthiness Category (Normal, Restricted, Transport):

Pilot Name and Certificate Number:

DATES AND TIMES OPERATION WILL BEGIN AND TERMINATE:

Date	Time begin	Time end
_____	_____	_____
_____	_____	_____
_____	_____	_____

Name, title, and telephone number of appropriate official of the local subdivision who has agreed to exclude unauthorized persons from the operational area, if applicable:

Copy of agreement attached?

List of streets or roads that will be blocked during operation, if applicable:

Ingress/Egress routes, if applicable:

(If appropriate) This operation has been coordinated with the following air traffic control facilities:

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Appendix 1

Description and Weight of Loads to be Carried:

Class _____

Description _____

Length of attaching means (includes hook and cable) _____

Weight of load _____

Physical size of load _____

List of Buildings that shall be either partially or entirely unoccupied by persons:

Building Description/Address Owners Telephone number

Load Penetration (for occupied buildings): How many floors could be penetrated by the load if dropped from the highest point it will be lifted above the building? _____ floors. What is maximum height the load will be lifted above building? _____ ft. Are charts, maps, and/or diagrams attached?

Narrative description of pickup site, route, delivery site, and plan for ceasing operation if unauthorized persons enter operational area.

(Use additional sheets as necessary.)

[company official's signature]
[title]
[date]

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

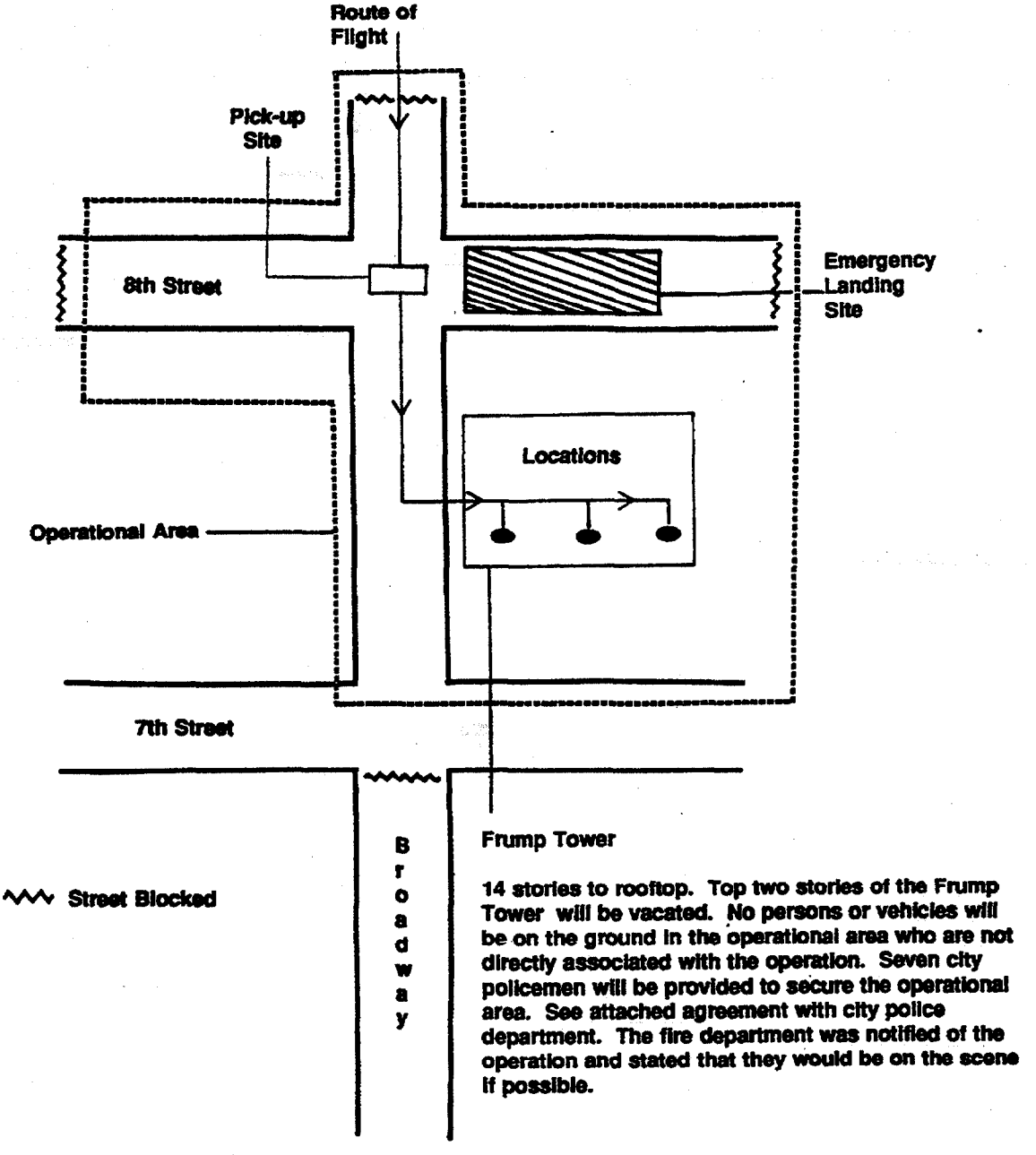


FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

LETTER OF AGREEMENT FOR CONGESTED AREA

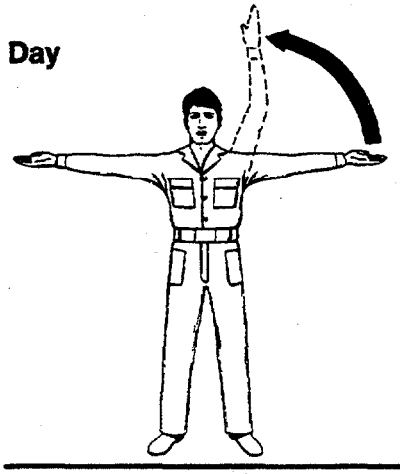
Personnel of the [name of the political subdivision] agree to exclude all unauthorized persons from the operational area described on the attached Congested Area Plan, which was prepared for rotorcraft external-load operations. I understand that the operations will be conducted on [dates] and remove the operator's responsibility to exclude all unauthorized persons from the operational area.

[name of official]
[title of official]
[date]

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Move to Left: *Right arm extended horizontally sideways in direction of movement and other arm swung in front of body in same direction, in a repeating movement.*

Day



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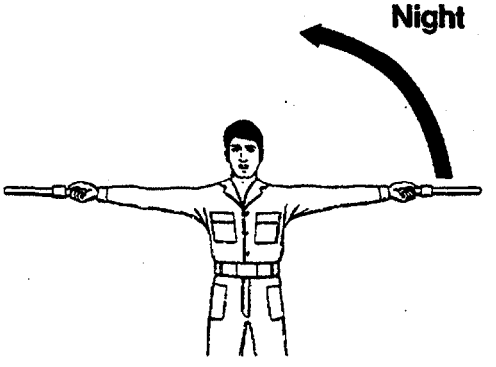
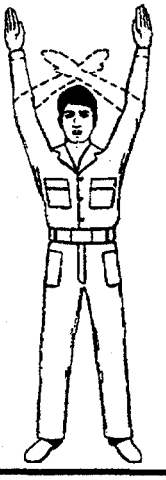


Stop: *Arms held crossed overhead.*

Day



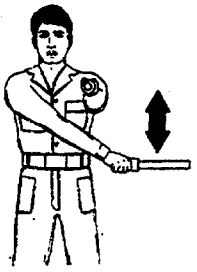
Night

FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Release Sling Load: *Left arm extended forward horizontally, fist clenched, right hand making horizontal slicing movement below the left fist, palm downward.*

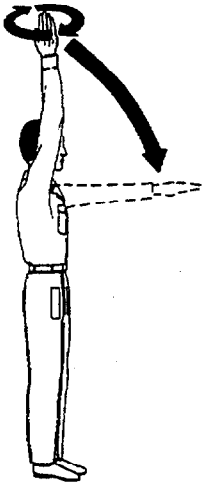
Day

Night



Takeoff: *The right hand is moved in a circular motion overhead, ending in a throwing motion in the direction of takeoff. Also means load clear, hookup good.*

Day



Night

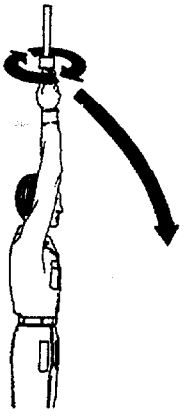
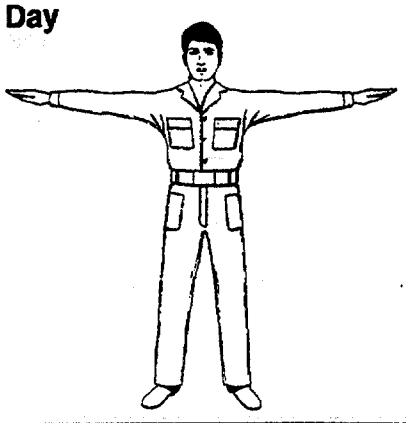


FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Hover: *Arms extended horizontally sideways, palms downward.*

Day



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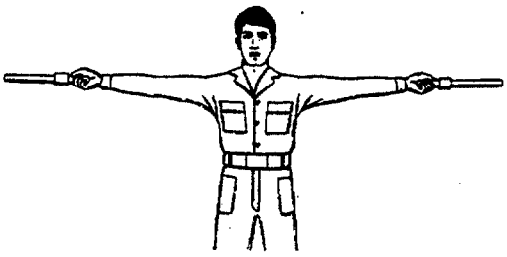
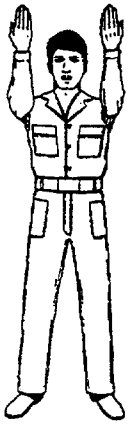


Move Forward: *Arms a little aside, palms facing backward and repeatedly moved upward-backward from shoulder height.*

Day

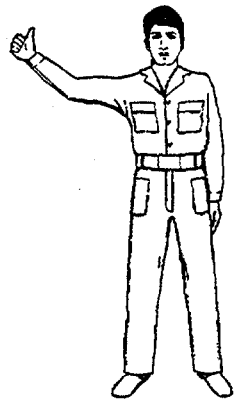


Night

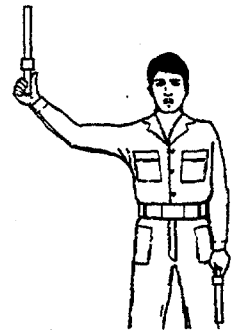
FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Affirmative Signal: *Hand raised, thumb up.*

Day

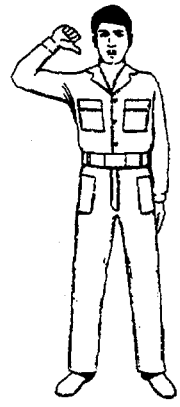


Night



Negative Signal: *Hand raised, thumb down.*

Day

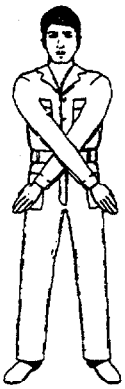


Night

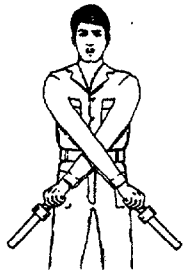
FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Land: *Arms crossed and extended downward in front of the body.*

Day

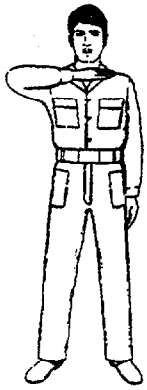


Night



Cut Engine(s): *Either arm and hand level with shoulder, hand moving across throat.*

Day



Night

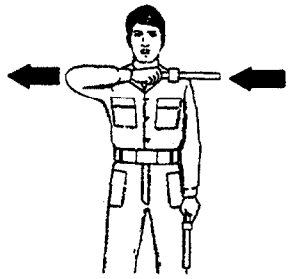
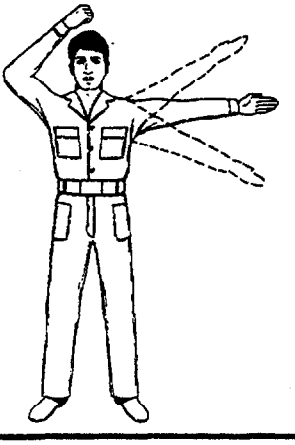


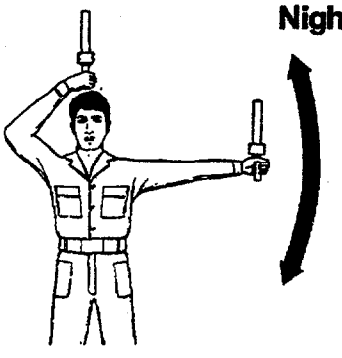
FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Move Hook Down or Up: *Right fist held above head: left arm extended horizontally, palm faced outward, then swept down or up to indicate direction of hook movement.*

Day

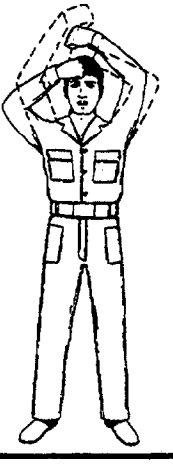


Night



Hookup: *Hands raised alternately above the head in a "rope climbing" motion to take up slack.*

Day



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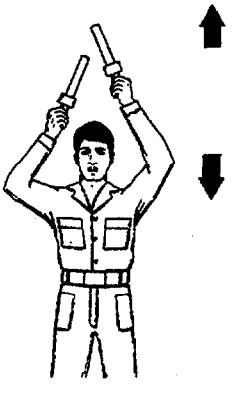
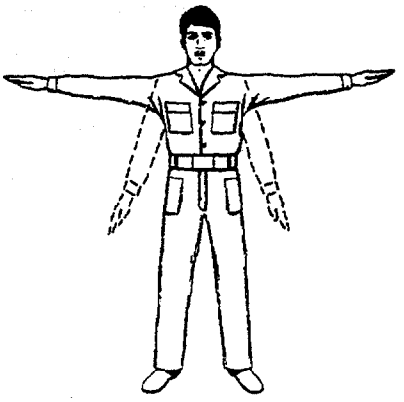


FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Move Downward: *Arms extended horizontally sideways, beckoning downward, with palms turned down.*

Day



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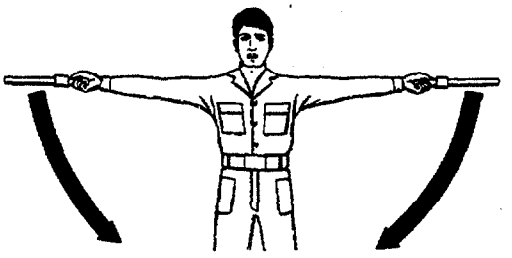
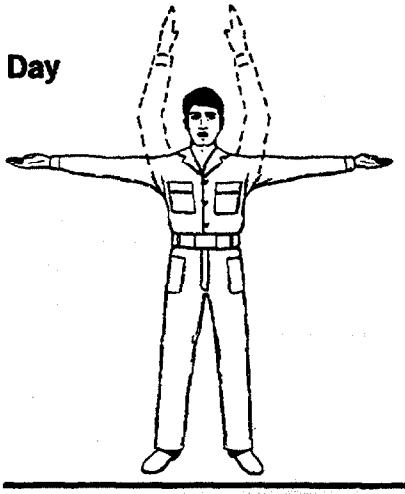


Move Upward: *Arms extended horizontally sideways, beckoning upward, with palms up.*

Day



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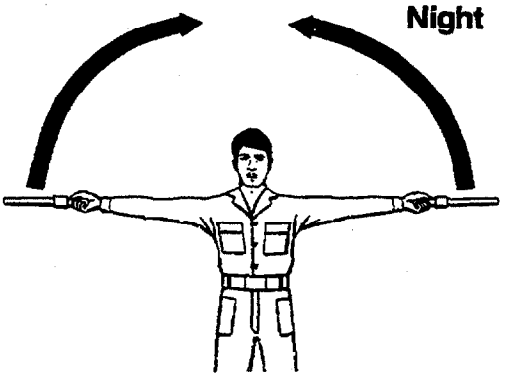
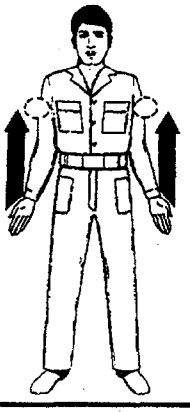


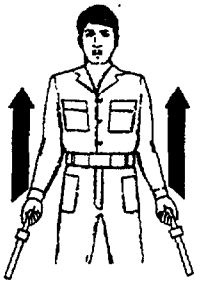
FIGURE 98-1—Continued
SAMPLE ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

Move Rearward: *Arms by sides, palms facing forward, arms swept forward and upward repeatedly to shoulder height.*

Day

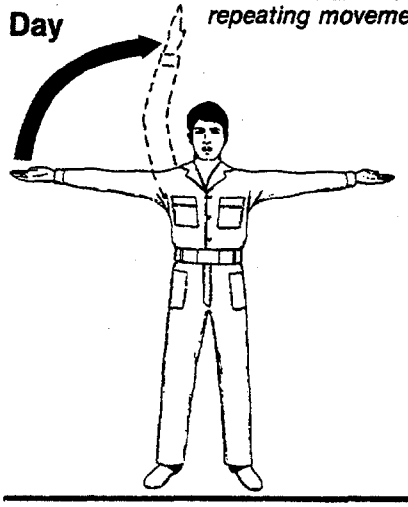


Night



Move to Right: *Left arm extended horizontally sideways in direction of movement and other arm swung overhead in same direction, in a repeating movement.*

Day



Night

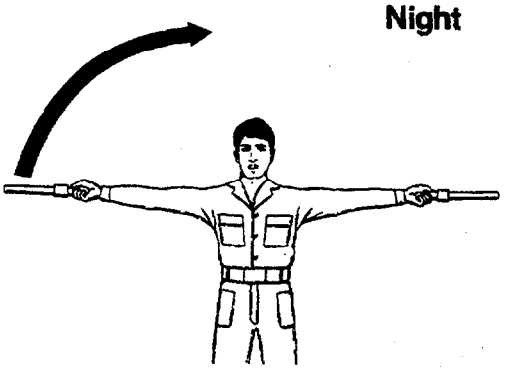


FIGURE 98-2
LETTER REJECTING RLCFM OR PROPOSED REVISION

FAA Letterhead

[name and address of operator]

Dear [name of operator],

The revisions submitted for your Rotorcraft-Load Combination Flight Manual (RLCFM) are being returned for the following reasons:

List the appropriate area that does not conform to the associated 14 CFR or is in contradiction with the operations specifications.

Sincerely,

[POI's signature]

CHAPTER 101. CONDUCT A PART 133 BASE INSPECTION

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE. 1635

2. OBJECTIVE. The objective of this task is to determine whether an applicant meets the Title 14 of the Code of Federal Regulations (14 CFR) part 133 regulatory requirements for initial certification, or whether an applicant continues to be able to conduct operations in compliance with the 14 CFR. Successful completion of this task results in either a satisfactory or an unsatisfactory indication findings in the Flight Standards District Office (FSDO) files.

3. GENERAL.

A. Authority. Title 14 CFR § 133.39 allows the Administrator to make the inspections and/or tests found necessary to ensure compliance with the regulations.

B. Flight Under Instrument Flight Rules (IFR). Upon inspection 14 CFR part 133 operators, with authorization to conduct flight under IFR must present records showing they have a pilot who is rated and current and a rotorcraft that is certificated and equipped for flight under IFR. If the operator cannot produce this documentation during a base inspection, then the operations specifications (OpSpecs) authorizing flight under IFR should be surrendered or rescinded. This is notwithstanding 14 CFR § 133.27(c). The operator may retain the operating certificate for up to 2 years after discontinuing operations, but the operator may not retain IFR OpSpecs without having a current IFR pilot and appropriately equipped rotorcraft.

C. Operator Recordkeeping. The Administrator requires the operator to maintain records for the purposes of inspections and determining compliance with the regulations.

(1) For each class of authorization, the operator must maintain current pilot records signed by the chief pilot. These records should include the following:

(a) the rotorcraft classes each pilot is authorized to fly;

(b) a record of each pilot's duty appointment, such as chief or assistant chief pilot, and the effective date of the appointment to each duty position;

(c) the dates each pilot was assigned to operate external-loads and the dates each pilot was removed from an assignment;

(d) a copy of the appropriate logbook endorsements, letters of competency, or verification of a pilot's passing a knowledge and skill test for the class of external-load that pilot is assigned to; and

(e) a record of each pilot's operational checks.

(2) For Class D, the operator shall maintain the following records, which are signed by the chief pilot, in addition to those listed above:

(a) all the pilots' training records signed by the chief pilot, reflecting the date(s) the pilot completed the initial or recurrent training; and

(b) a record for each pilot of Class D currency within the past 12 months that specifies class load, make and model rotorcraft, and date of operations.

(3) For flight under IFR, the operator shall maintain the following additional records for each pilot:

(a) a list of assignments stating the class of load and make and model of rotorcraft each pilot is authorized to operate; and

(b) an IFR currency record, a copy of logbook endorsement for 14 CFR § 61.57 instrument competency check, or a record of instrument currency (6 hours and 6 approaches) obtained within the past 6 months.

4. GUIDELINES FOR DIFFICULTIES FREQUENTLY ENCOUNTERED IN 14 CFR PART 133 OPERATIONS.

A. Coordination. When an airworthiness inspector cannot attend the base inspection, the operations

inspector should tailor the inspection to examine general airworthiness aspects.

(1) The inspector should be prepared to conduct a general examination of the equipment, including the attaching means, the Personnel Lifting Devices (PLD), and the normal and emergency release devices.

(2) The inspector should observe actual operational checks performed by the pilots, such as the installation and removal of the attaching devices that are approved for pilots to install.

(3) The inspector should coordinate with the airworthiness unit to ensure follow-up inspection of any items outside of the inspector's expertise.

B. Levels of Deficiency and Appropriate Corrective Action. This paragraph offers examples of various deficiencies that might occur in an inspection and the appropriate action to take for each situation. The actions described are based on two assumptions. First, even though a discrepancy is found, the base inspection is completed. After inspection, all the deficiencies and recommended corrective actions would be summarized in a note to the file and/or in remarks to the PTRS Data Sheet. Secondly, an unsatisfactory report often calls for an enforcement action. Unsatisfactory reports are usually based on violations of certification or operating rules found during the inspection. The requirements for holding an external-load operating certificate are never less than those for initial certification. There are intermediate stages between satisfactory and unsatisfactory results that may result in a satisfactory inspection with corrective action.

(1) A **spot correction** is a discrepancy that is not a violation and is corrected during the inspection. It may require no further action. An example of a spot correction is: the inspector does not find a facsimile of the external-load operating certificate on board the rotorcraft. The corrective action is the inspector notifying the operator that the certificate is not in the rotorcraft. During the inspection, the operator makes a copy of the certificate and places it in the rotorcraft. No other corrective action is taken because no external-load operation was found to be conducted without the certificate. However, the inspector marks the PTRS Data Sheet with an "I" to indicate that information, and notes that no facsimile of the certificate was found upon inspection, and that a spot correction was made.

(2) **Followup action** is taken on deficiencies or lack of pilot knowledge that do not involve violations. An example of a correction that needs follow-up action is: at the time of inspection, a placard was missing from the rotorcraft and it was not readily available. However, there was no evidence that the aircraft was operated without it. As a corrective action, the inspector advises the operator verbally of the deficiency, then writes a letter to the operator outlining the discrepancy found during the inspection, makes a copy of the letter for the FSDO file, and schedules a follow-up inspection. The inspector marks the PTRS Data Sheet with an "F" indicating follow-up.

(3) A **finding of unsatisfactory** involves a blatant violation. An example of an unsatisfactory inspection is: during an inspection, the inspector finds that a new chief pilot has been designated who has not completed the knowledge and skill test. The inspector contacts the previous chief pilot and obtains verbal and written statements as well as a copy of the previous chief pilot's last pay stub that proves the chief pilot ceased serving as chief pilot more than 30 days before the last external-load operation conducted by the operator. (See volume 2, chapter 182, Conduct an Investigation to Determine Compliance and FAA Order 2150.3, Compliance and Enforcement.)

C. Presence of Chief Pilot and Other Pilots at Inspection. It is desirable to be able to spot-check the knowledge of the chief pilot and other pilots of the operation. Spot-check examination of pilots is necessary to verify continuing compliance because of the lack of annual proficiency checks in part 133 operations. The inspector, for example, should ask questions on the Rotorcraft Load Combination Flight Manual (RLCFM), including weight and balance problems and, if applicable, questions on the OpSpecs for Class D and/or IFR operations. In addition, the inspector should ask the pilots to demonstrate the use of attaching means, the operation of normal and emergency release mechanisms, and the operation of the winch, as applicable. If, as a result of an inspection or test, the pilot or operator's competency is found questionable, the inspector takes action under Title 49 of the United States Code (49 U.S.C.) section 609 and/or enforcement action (see volume 2, chapters 182 and 26, Conduct a Reexamination Test of an Airman Under Title 49 of the United States Code).

D. Discrepancy Between FSDO Files and Home Base Files. If there is a discrepancy between the records kept in the FSDO file and those found during the base inspection, the inspector determines which records are current and/or approved and requires

correction of the unapproved or outdated ones. For example, a new rotorcraft may have been used without having been added to the list of authorized rotorcraft. The list is no longer current, and the inspector may require an enforcement action to rectify the omission.

E. An Expired Lease Agreement. For purposes of renewal, the exclusive use agreement must be current.

5. INITIAL CERTIFICATION VS. LATER SURVEILLANCE. When this task is performed as the base inspection for original certification (during the demonstration and inspection phase of the certification process), there are some items that cannot be inspected. For example, an applicant for an external-load operating certificate would not have certificate facsimiles or lists of authorized rotorcraft for examination. For an original certification, the inspector marks the "N/A" column on the base inspection job aid (figure 101-1) for items that cannot be evaluated.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of part 133 and FAA policies and qualification as an Aviation Safety Inspector (ASI) Operations with knowledge of external-load operations.

B. Coordination. This task requires coordination with the airworthiness unit.

2. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- 14 CFR parts 1, 27, 29, 61, 91, and 133
- Advisory Circular (AC) 133-1, Rotorcraft External-Load Operations in Accordance with 14 CFR Part 133
- PTRS Procedures Manual (PPM)
- FSDO files for this operator or applicant working file for initial certification

B. Forms.

- FAA Form 8710-4, Rotorcraft External-Load Operator Certificate Application (for renewal or amendment)

C. Job Aids.

- Base Inspection Job Aid (Figure 101-1)
- Sample letters and figures

3. PROCEDURES.

A. Pre-Inspection Activities.

(1) Open PTRS file.

(2) Review operator's records file at the FSDO for currency and applicability of the following:

(a) the Congested Area Plans (CAP);

(b) the Minimum Equipment Lists (MEL);

(c) the training program (Class D only);

(d) the RLCFM (except restricted category aircraft);

(e) the operating certificate;

(f) the list of authorized rotorcraft;

(g) the OpSpecs for Class D and IFR;

(h) the chief pilot's designation;

(i) the training records and evidence of knowledge and skill tests;

(j) any previous ramp inspections;

(k) any complaints;

(l) the operator's and pilots' violation histories;

(m) the operator's and pilots' accident/incident histories; and

(n) the associated records of surveillance.

(3) Schedule the base inspection.

(a) Schedule an appointment with the operator at the home base.

(b) Advise the operator to have the chief pilot and at least one other pilot available during inspection, if possible.

(c) Arrange to have at least the exclusive-use rotorcraft available.

(d) Remind the operator that the rotorcraft logbooks and engineering data must be available at the inspection, if practicable.

B. Conduct the Base Inspection.

(1) Inspect the following records to determine compliance with the regulations.

(a) Ensure that the operating certificate is available for inspection and lists all current authorizations. A copy must be on board each rotorcraft during part 133 operations. The original operating certificate and all facsimiles must be identical to the copy in the FSDO files.

(b) Inspect the list of authorized rotorcraft to ensure that it reflects the rotorcraft currently available for use. A copy of this should also be on board each rotorcraft during part 133 operations. This list and all copies of it must be identical to the most current version in the FSDO files.

(c) Examine the RLCFM of each rotorcraft for currency.

(d) Check to see that the operator has copies of the current regulations, AC's, and current approved rotorcraft flight manual (RFM) for each rotorcraft.

(e) For CAP's, see volume 2, chapter 102.

(f) Check for proof of ownership of the rotorcraft, or check the exclusive lease agreement, or notes on the agreement for exclusivity of use.

(g) Check for the appropriateness of external-load classification.

(h) Determine each pilot's qualifications for the operation by examining the records of each pilot's logbook endorsement or knowledge and skill letter of competence.

(i) For Class D, check training program to see if there are any unapproved changes. Ensure that the program matches the one filed in the FSDO.

(j) For an IFR authorization, check that at least one pilot is current for IFR rotorcraft operations and that at least one rotorcraft is certificated and equipped for flight under IFR (Airworthiness Unit).

(k) Examine the OpSpecs to determine if it is available for inspection and current for Class D and IFR.

(l) Inspect the records of each pilot.

i. For pilots with Class D authorization, check their records to ensure initial or recurrent training (as appropriate) has been received within the preceding 12 calendar months.

ii. For all pilots, ensure they have conducted rotorcraft external-load operations of the same class and in a rotorcraft of the same type within the preceding 12 calendar months.

(2) Spot-check any available external-load pilots. Examine the pilots verbally for competence in the following critical areas.

(a) Determine the pilots' understanding of the operating limitations outlined in 14 CFR § 133.45.

(b) Determine the pilots' knowledge of the OpSpecs (Class D and/or IFR).

(c) Ask the pilots to compute a weight and balance problem.

(3) Inspect the rotorcraft. (Airworthiness Unit)

C. Observe an On Site Operation. If possible, observe an actual external-load operation. Do not request the operator to conduct one unless one is scheduled.

D. Satisfactory Examination Results.

(1) For an initial certification, indicate "satisfactory" on the base inspection job aid and the certification job aid. Proceed with the other demonstration and inspection phase inspections.

(2) For a renewal, complete the application, prepare and issue a new certificate, and make a copy of the certificate for the FSDO file. If there are any changes from the initial certification or previous renewal, make a copy of the most recent certificate and indicate the changes from that copy to the current one. Indicate "satisfactory" on the base inspection job aid.

(3) For follow-up items, advise the operator verbally of the deficiency and, if necessary, write a letter to the operator outlining the discrepancies found during the inspection (figure 101-2). Schedule a follow-up inspection as appropriate.

E. Unsatisfactory Examination Results.

(1) Inform the operator that the inspection was unsatisfactory. Confirm the deficiencies encountered in writing (figure 101-3).

(2) According to the severity of the problem, take one of the following actions:

(a) schedule a follow-up inspection in 30 days; or

(b) initiate an enforcement investigation (see volume 2, chapter 182).

F. PTRS. Close PTRS file.

4. TASK OUTCOMES. Completion of this task results in one or more of the following.

A. A record indicating a satisfactory inspection.

B. A record indicating an unsatisfactory inspection.

C. A record on file indicating deficiencies found during inspection that were corrected on the spot.

D. A letter to the operator indicating any discrepancies found during inspection.

5. FUTURE ACTIVITIES.

A. Follow-up inspection with a change in frequency of the surveillance plan for unannounced inspection.

B. Re-examination of pilot by conducting knowledge and skill test, as necessary.

FIGURE 101-1
PART 133 BASE INSPECTION JOB AID

14 CFR PART 133 BASE INSPEDCTION JOB AID _____ Initial Certification _____ Renewal _____ Amendment _____ Surveillance	NAME OF OPERATOR: INSP. INITIAL	DATE	YES	NO	N/A
1. FSDO file reviewed					
2. Application properly completed for renewal/amendment					
3. Rotorcraft inspection					
a. Equipped with a fixed external cargo carrying device for Class A loads					
b. Equipped with a hook for Class B and C loads					
c. Equipped with a winch or other device					
d. 14 CFR § 133.49(a) placard in the cabin stating the class or classes for which approval has been given					
e. 14 CFR § 133.49(b) marking adjacent to the load carrying device -stating maximum load as per the rotorcraft					
f. Inspection of all aircraft:					
(1) Installation and function of the load carrying or attaching devices					
(2) Optional equipment installations inspected					
4. Operator has a copy of AC 133-1					
S. Operator has pertinent 14 CFR					
6. RLCFM's approved and current					
a. Ground crew briefing included					
b. All items required by 14 CFR § 133.47					
7. Operator holds Class D Authorization					
a. OpSpecs current and available for inspection					
b. Operator has use of an FAA-approved PLD					
c. Training records for each pilot participating in Class D operations					
d. Operator has use of operable ground and flightcrew -communica-tions equipment					
8. Operator has appropriate chief pilot and other pilot services					
a. All pilots passed knowledge test (14 CFR § 133.23(b))					
b. All pilots passed skill test (14 CFR § 133.23(c))					
c. All pilots have conducted FAR Part 133 Operations within previous 12 months					
9. Congested area operations conducted					
10. CAP approved					
11. Pilot understands 14 CFR § 133.45 limits					
a. Understands operating limitations in 14 CFR § 133.4					
b. Understands passenger carrying limitations during external-load operations					
c. Able to compute weight and balance					
d. Understands operating airspeed limit					
e. Understands limitations concerning restricted category rotorcraft					
f. Understands typical hand signals					
g. Understands content of OpSpecs					
12. Operator has IFR authorization					
a. At least one pilot IFR rated and current in rotorcraft					
b. At least rotorcraft certified and equipped for IFR flight					
c. IFR OpSpecs current and available for inspection					
13. External-Load Operator Certificates available for inspection/current					
14. Lists of authorized rotorcraft available for inspection/current					

REMARKS:

FIGURE 101-2
LETTER OUTLINING INSPECTION DISCREPANCIES

FAA Letterhead

[*date*]

[*operator's name and address*]

Dear [*name of responsible person*]:

During an inspection of your facilities and equipment conducted on [*date*], the following discrepancies were noted:

- *List specific discrepancies.*
- *List discrepancies that were corrected during the inspection.*

The above items should be corrected within 30 days of receipt of this letter. A follow-up inspection is scheduled for [*time and date*]. If you are unable to correct these discrepancies before the next inspection or have any questions, please contact this office.

Sincerely,

[*Principal Operations Inspector's (POI) or Certification Project Manager's (CPM) signature*]

FIGURE 101-3
LETTER INDICATING INSPECTION WAS UNSATISFACTORY

FAA Letterhead

[*date*]

[*operator's name and address*]

Dear [*name of responsible person*]:

The inspection of your facilities and equipment conducted on [*date*] was unsatisfactory.

The following items were determined to be not in compliance with the Federal Aviation Regulations.

- *List each specific item and the related 14 CFR, for example*:

  Pilot training records for [*pilot's name*] did not indicate satisfactory completion of the appropriate knowledge and skill tests (14 CFR § 133.37).

This matter is now under investigation by the Federal Aviation Administration. We wish to offer you an opportunity to discuss the incident personally and submit a written statement. If you desire to do either, this should be accomplished within 10 days following receipt of this letter. Your statement should contain all pertinent facts and any extenuating or mitigating circumstances that you believe may have a bearing on the incident. If we do not hear from you within the specified time, our report will be processed without the benefit of your statement.

Sincerely,

[*POI's or CPM's signature*]

NOTE TO INSPECTORS: This letter may also be used as the Letter of Investigation to initiate enforcement action against a certificated operator.

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CHAPTER 102. EVALUATE A PART 133 CONGESTED AREA PLAN (CAP)

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE. 1332

2. OBJECTIVE. The objective of this task is to determine if a CAP meets all regulatory and safety requirements. Successful completion of this task results in either approval or disapproval of a CAP.

3. GENERAL.

A. Authority. Title 14 of the Code of Federal Regulations (14 CFR) part 133, § 133.33(d)(1)(2) permits an operator to conduct external-load operations over congested areas provided the operator does so without creating undue hazard to persons or property. Each flight must be conducted on a route and at an altitude that will allow a jettison able load to be released and the helicopter to be landed safely if an emergency arises. (Reference paragraph C(8).) Title 14 CFR § 133.33(d)(1) requires the operator to develop a plan for each operation in a congested area. The plan must be approved by the Flight Standards District Office (FSDO) having jurisdiction over the area in which the operation will be conducted.

B. Background. The Federal Aviation Administration (FAA) has determined that external-load operations are in the public interest and do not inherently pose an undue risk to the public. Hazards are prevented by risk management procedures such as a CAP, and by frequent surveillance. Title 14 CFR § 133.33(d)(1) describes the information that must be included in a CAP.

C. Definitions. For the purpose of operations conducted under 14 CFR part 133 the following definitions apply:

(1) Without Hazard. This means to operate without undue hazard beyond the risk posed by other aircraft operations to nonparticipating public or property. The nonparticipating public is expected to be protected from all the potential hazards associated with external-load operations. Property should be protected as much as possible. Potential hazard to property alone should not preclude conducting an external-load operation in accordance with a CAP.

(2) Congested Areas vs. Densely Populated Areas. These two terms are used in reference to rotorcraft external-load operations. Although the terms describe similar areas, the meanings are different. The regulations require preparation of a CAP for congested areas. A CAP is also needed for densely populated areas. In addition, an uncongested, sparsely populated area may need a CAP because the area may quickly become congested with persons watching an external-load operation.

(a) Congested Area. The congested nature of an area is defined by what exists on the surface, not the size of the area. While the presence of the nonparticipating public is the most important determination of congested, the area may also be congested with structures or objects. An area considered congested for airplane operations could be equally congested for helicopters. If an airplane flying over a congested area at less than 1,000 feet above ground level (AGL) is in violation of 14 CFR § 91.119(b), the area may also be a congested area for a helicopter conducting external-load operations. However, the most important word in this concept is over. Helicopters can operate over relatively small uncongested areas because of their maneuvering abilities.

(b) Densely Populated Area. Title 14 CFR §§ 91.313 and 133.45(d) use the term "densely populated" area. Those areas of a city, town, or settlement that contain a large number of occupied homes, factories, stores, schools, and other structures are considered densely populated. Additionally, a densely populated area may not contain any buildings but could consist of a large gathering of persons on a beach, at an airshow, at a ball game, or at a fairground.

NOTE: While the presence of the nonparticipating public is the most important determination of congested, this definition also applies to structures, buildings and personal property. The congested nature of an area is defined by what exists on the surface, not the size of the area.

(3) Operational Area. An area unoccupied on the surface by the nonparticipating public. The operational area is not part of the operation, but persons within this area could be injured, or property could be damaged by the external-load, or by the attaching means (load, cables, hooks, etc.).

(4) Congested Area Plan. The CAP is a risk management document. It is used to show that the risk associated with an external-load operation will not create undue hazards to property and the nonparticipating public because of certain, specific procedures used by the operator during the operation.

(5) Contractor. The person, corporation, or entity who hired an operator to conduct the external-load operation.

(6) Appropriate Political Subdivision. This term describes local officials who may exercise the authority to exclude persons and property from an area. These officials include the county sheriff, city police department, highway patrol, fire department, or security guards acting for the political subdivision. In many cases local police will monitor an external-load operation but will require the operator to supply sufficient personnel to exclude persons and property from the lift area.

(7) Emergency Landing Site. Title 14 CFR § 133.33(d)(2) requires the rotorcraft to be at an altitude that allows landing in an emergency without hazard to persons or property on the surface. There is no requirement that the emergency landing be made without damage to the rotorcraft. An emergency landing site does not have to be an improved surface. The parking lot at the pickup site or a roof top at the set site are examples of emergency landing sites.

(8) Near a Busy Airport Where Passenger Transport Operations are Conducted. An external-load operation conducted within Class D airspace could be considered near a busy airport under 14 CFR § 133.45(d). External-load operations with restricted category rotorcraft may not be conducted within such an area when passenger transport operations (air carrier and air taxi) are being conducted. The operator should be advised that advance coordination with the Air Traffic Control (ATC) facility is necessary to ensure the establishment of the proposed hours of external-load operation. The external-load operators using restricted category rotorcraft must show that adequate procedures exist to ensure that no external-load operation is conducted when passenger transport operations are in progress. Passenger transport operations are considered in progress whenever an aircraft engaged in these operations is in flight within the above defined areas and the operator is so advised by ATC.

D. Authorization Limitations of 14 CFR § 21.25.

(1) Section 133.33(d), Operating Rules, provides for the approval of a congested area plan for the conduct of external-load operations by aircraft certificated under and meeting the requirements of 14 CFR part 27 or 29. Section 133.33(d) does not provide for the approval of a congested area plan for the purpose of conducting external-load operations by aircraft certificated under and meeting the requirements of 14 CFR § 21.25.

(2) Section 91.313(e), Restricted Category Civil Aircraft: Operating Limitations, prohibits any operation of aircraft certificated under 14 CFR § 21.25 from operating over densely populated areas, on a congested airway, or near airports where passenger transport operations are conducted unless operating limitations have been issued to permit such operations or a waiver to the rule has been issued by the geographically responsible FSDO in accordance with 14 CFR § 91.905.

(3) Section 133.45(d), Operating Limitations, prohibits external-load operations by rotorcraft certificated under 14 CFR § 21.25 over densely populated areas, on congested airways, or near airports where passenger transport operations are being conducted, and waivers are **not** authorized. These prohibitions remain in place and are not under consideration for change.

E. Contingency Plans. Section 133.33(d)(1) defines a CAP, and describes the information that must be presented in such a plan. The rule provides only for the formulation of a CAP for external-load operations conducted over congested areas by operators of aircraft certificated under part 27 or 29. For operations over other than congested areas, operators may be required to develop a contingency plan (other than a CAP) to prevent the area from becoming congested.

(1) Restricted category aircraft may be flown over congested areas to the load site when operating in accordance with the terms and conditions of a certificate of waiver or special operating limitations issued by the local FSDO in accordance with 14 CFR part 91, § 91.313(e).

(2) If the external-load lift site is determined to be other than a congested area, is made sterile (non-participating personnel removed from the site), and no airport or airway incursions occur, a helicopter **not** type certificated under 14 CFR part 27 or 29 may conduct an external load operation. However, a contingency plan (not a CAP) may be necessary to determine that the operator has considered areas for load jettisoning, emergency landings, ingress and egress routes, and means for maintaining a sterile area. This last item is most important since the mere presence of a helicopter conducting an external-load operation is likely to draw spectators and other unnecessary personnel to the scene, to the extent that the area may become congested.

(3) If the external-load lift site is determined to be other than a congested area, operators of rotorcraft certificated under part 27 or 29 may be required to develop a contingency plan that includes the provisions for a CAP in the event the lift area becomes congested.

F. Restricted Category Rotorcraft. Title 14 CFR part 133 provides that a rotorcraft external-load operator may conduct operations over congested areas only in a rotorcraft type certificated under and meeting the requirements of parts 27 and 29 (normal and transport category rotorcraft). Restricted category rotorcraft certificated in accordance with part 21 do not necessarily meet airworthiness requirements for parts 27 and 29. Therefore, in order to maintain an equivalent level of safety, restricted category rotorcraft shall not be used in external-load operations:

(1) Over congested or densely populated areas.

(2) In congested airways, or near a busy airport where passenger transport operations are conducted.

NOTE: An operator performing external-load operations using restricted category rotorcraft over an uncongested area must ensure that the area being utilized remains uncongested for the duration of the operation. In addition, the external-load operator using restricted category rotorcraft near a busy airport must show that adequate procedures exist to ensure that no external-load operation is conducted when passenger transport operations are in progress. (An external-load operation conducted within Class D airspace could be considered near a busy airport under 14 CFR § 133.45(d)). The operator should be advised that advance coordination is required with the ATC facility having jurisdiction over the airport.

G. Evaluation of the CAP. For each operation, the certificate holder is required to submit a plan that must be approved by the FSDO having jurisdiction over the area in which the operation will be conducted. A separate plan is not necessary for each flight. One plan may suffice for an operation that requires several flights or even days to complete. Plans vary widely and it is up to the inspector to consider all situations that may arise.

H. Qualifications of the Inspector Evaluating the Plan. Whenever possible, CAP's should be reviewed by an Inspector with experience as an external-load helicopter pilot. If a FSDO does not have an inspector with this experience, the best qualified operations inspector will be designated by the office manager.

I. The Concept of Risk Management in External-Load Operations. It is unreasonable to expect the plan or the inspector to foresee every unlikely eventuality, including crash forces or scatter patterns. A helicopter crash that occurs during a low speed, low altitude external-load operation may produce less crash forces than another helicopter without an external-load that impacts with 120 knots forward speed. Consequently, both the operator and the inspector must weigh all the alternatives and carefully make decisions that would not unduly restrict external-load operations that are clearly in the public interest. The operator is responsible for developing a plan that minimizes manageable risk.

(1) Identification of rotorcraft is used to verify that a particular helicopter is on the List of Authorized Rotorcraft.

(2) Identification of rotorcraft airworthiness category is used to determine whether the operator plans to use restricted category helicopters. The inspector should also determine if the area of the proposed operation is a congested area. (See paragraph 3D.)

(3) It is necessary to include the dates and times of the proposed operation. This enables the Inspector to evaluate the exclusion of unauthorized persons from the operational area by local authorities and/or the operator. It also provides the inspector with the opportunity to schedule surveillance during the operation.

(4) The name, phone number, and title of the official of the local political subdivision should be provided, when appropriate.

(5) When evaluating the plan, the inspector should consider the weight, shape, and aerodynamic flight characteristics of the load.

(6) The inspector needs to know the proposed length of cable to determine if the plan provides for an adequate operational area.

(7) The operator should estimate how many floors the load, with attaching means, could penetrate if dropped from the highest point that it will be lifted above the building. The type of roof construction and the size, shape and weight of the load must be taken into account. The plan should require that one additional floor beyond those estimated to be penetrable be unoccupied. On a tiered building, the height the load will be lifted above each tier will determine the number of floors in the respective tiers that must be unoccupied (figure 102-2).

(8) The Inspector should be provided with phone numbers to contact the building owner and/or manager for verification that the building will actually be unoccupied during the operation. Exclusion of persons includes after-hours personnel such as building maintenance workers.

(9) Aeronautical charts alone often do not provide sufficient detail for depicting routes and altitudes over a congested area. City maps or even hand drawn charts may be necessary. Hand drawn charts should be drawn to approximate scale. Topographical maps, charts and aerial photographs should be as current as possible to assure an accurate representation of the area.

(10) When available, photographs of the lift site, set site and surrounding areas can also be an asset to the inspector. If the CAP is in an area unfamiliar to the inspector, the addition of these photographs can greatly reduce the amount of time needed to approve the CAP.

NOTE: Each external-load operation is unique. The risk to the nonparticipating public dictates operational area requirements. It must be emphasized that the following criteria are guidelines and the inspector may exceed or reduce them as appropriate.

J. Criteria 1, Normal Loads. For non-aerodynamic loads, such as air conditioning units and flag poles flown below effective translational lift (ETL), the radius of the operational area should be at least 1.5 times the overall length (including rotor discs) of the helicopter used, or the length of the external-load including the attaching means (cable, etc.), whichever is greater. (figure 102-3) When operating along a route above ETL, the operational area should extend at least 45 degrees in front of the rotorcraft. For example, if the rotorcraft (not load) will be operated at 300 feet above the surface, the operational area should extend at least 300 feet in front of the rotorcraft. The forward radius should not extend less than three times the overall length of the helicopter (figure 102-4).

K. Criteria 2, Aerodynamically Shaped Loads. For aerodynamic loads, use whichever is greater: Criteria 1 (paragraph 3I) or paragraph 3J, Criteria 2. In Criteria 2, the criteria applied to aerodynamic loads provides for about 45 degrees of drift after the load is released. If the load is lifted 200 feet high, the operational area radius should be 200 feet. The method of calculation that provides for the greatest operational area should be used. For example, a helicopter will transport an aerodynamically shaped load along a congested area route. The higher the load is lifted above the surface, the wider the operational area must be to accommodate release of the load. Conversely, operating the rotorcraft at a higher altitude provides more options for landing in an emergency. Generally, the plan should provide for operating the rotorcraft at an altitude high enough to permit landing in an emergency, but hold the load low enough to ensure that the external-load will land within the operational area if it is released. (figure 102-5)

L. Conditions of Approval. The inspector may find it necessary to specify conditions of approval for a plan. These contingencies may be based on the inspector's experience monitoring similar plans or experience with this operator. The inspector may approve the plan in principle provided the operator complies with the written contingencies the inspector notes on the plan.

M. Coordination with Appropriate Officials. Local officials should exclude unauthorized persons from the site if open to the public. In some cases, local officials may delegate this task to the operator, who is ultimately responsible for site security.

N. Subcontracting Work or Equipment: Responsibility for the CAP. A situation may arise when an external-load operator contracts with another external-load operator for a specific operation. For example, operator A's helicopter can lift only a certain weight that is less than the weight of the load to be lifted. Operator B has a large helicopter that can lift the load. In this case, operator B would have to submit the CAP because operator B is actually performing the work. If operator A wishes to conduct the external-load operation using operator B's helicopter, operator A must meet all certification requirements appropriate to adding operator B's helicopter to operator A's list of authorized rotorcraft.

O. Site Inspection. Unless the inspector has a current working knowledge of the site/route, or the operator can supply photographs of sufficient detail, an on-site survey should be made.

P. Congested Area Plan Contingencies. The CAP submitted by the operator should contain contingency plans for as many variables as possible. With approved contingencies, the operator will not have to postpone the operation to seek FAA approval if the plan must be modified.

4. MONITORING A CONGESTED AREA PLAN. Ideally, each congested area plan operation should be monitored if practicable. However, an ongoing daily operation may not require continuous monitoring. An operator unfamiliar to the FSDO or an operator working over a congested area for the first time should require an inspector's presence for the duration of the operation. The inspector may initiate emergency revocation of an operation when it is determined that an operator continues to operate contrary to the plan (see volume 2, chapter 103).

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of 14 CFR part 133 and FAA policies and qualification as an Aviation Safety Inspector (ASI) Operations with experience as an external-load helicopter pilot.

B. Coordination. This task requires coordination with the local officials and possibly with the operator's Certificate Holding District Office (CHDO).

2. REFERENCES, FORMS AND JOB AIDS.

A. References.

- 14 CFR parts 1, 27, 29, 61, 91, and 133
- Advisory Circular (AC) 133-1, Rotorcraft External-Load Operations in Accordance with 14 CFR Part 133
- PTRS Procedures Manual (PPM)

B. Forms.

- None

C. Job Aids.

- Sample CAP
- Tape Recorder and Camera Equipment
- Sample letters and figures

3. PROCEDURES.

A. Initial Inquiry. Upon inquiry, give applicant a sample CAP or explain what the plan must include. Indicate that a portion of the Rotorcraft-Load Combination Flight Manual (RLCFM) is reserved for CAP's.

B. PTRS. Open PTRS file.

C. Review Submitted Plan. An acceptable plan must include (but not be limited to) the following information:

(1) The name, address, and phone number of operator;

(2) The name, address, and phone number of contractor;

(3) The identification number of rotorcraft (N-number);

(4) The type of aircraft (make and model) to be used and the rotorcraft airworthiness category (standard or restricted);

(5) The name of pilots involved in the congested area operation;

(6) The number of loads to be carried;

(7) A description of loads to be carried including the weight of each load;

(8) The date the operation begins, the dates of all flights, and the date the operation ends;

(9) The name and phone number of the person contacted at the Police, Sheriff, Fire Departments;

(10) The signature of person responsible for the company (usually the chief pilot);

(11) The date of submission;

(12) A copy of the written agreement with local officials for the exclusion of unauthorized persons, or the name and telephone number of the official if responsibility is delegated to the operator;

(13) A record of coordination with ATC (if applicable);

(14) A detailed chart depicting flight routes and altitudes;

(15) A diagram and narrative defining operational areas, pickup sites, delivery site, streets to be blocked and to be unoccupied by persons, and location of obstructions in the operating area;

(16) A procedure for ceasing operation if a potential or real hazard occurs;

(17) A list of all buildings to be unoccupied by persons during the lift;

(18) A list of buildings within the operational area that will be occupied by persons, as well as number of floors which shall be occupied;

(19) An estimate how many floors of the building would be penetrated if the load is released at the maximum height it will be lifted above the roof, if appropriate. The plan should provide the inspector with assurance that the load will penetrate no more than the number of floors specified in the plan;

(20) An estimate of how long the external-load attaching means will be, such as the length of the cable; and

(21) The designation of emergency landing areas at the delivery and pick up sites.

D. Verify Plan. Ensure that the operator has checked with the local political subdivisions to verify they agreed to provide security for the area and that they thoroughly understand the nature and implications of the plan.

E. Review Files. Review office files, or coordinate with the CHDO in order to review the current operating certificate to determine the class of authorization.

F. Site Inspection.

(1) Verify that the operational areas, including emergency landing sites, are adequate as described in the plan.

(2) Travel the actual route to verify that the load may be jettisoned and that the rotorcraft may be landed in an emergency.

(3) Note any discrepancies or conditions of approval.

G. Plan Satisfactory. When all requirements for the plan are met, approve it by stamping, dating, and signing each page. Make a copy of the plan for the FSDO files.

H. Plan Satisfactory with the Addition of Provisions. When all requirements have been met, but the further requirements must be made in the interest of safety, approve the plan with provisions specified in writing (figure 102-6). Make a copy of the plan and the provisions for the file.

I. Plan Unsatisfactory. Advise the operator that the plan is unsatisfactory and explain what the deficient areas are.

(1) Discuss whether to return the plan or whether the operator will amend the plan.

(2) Review resubmitted plan and reinspect the site as necessary.

J. PTRS. Close PTRS file.

4. TASK OUTCOMES. Completion of this task results in either:

A. A record in the file indicating an approved CAP, with or without contingencies; or

B. A letter to the operator outlining areas of deficiency in a CAP.

5. FUTURE ACTIVITIES. Monitor the congested area operation to ensure compliance with the approved plan.

FIGURE 102-1
OPERATIONAL AREA AROUND BUILDING AND EMERGENCY LANDING SITE

R = 1.5 x Overall length (OL) of helicopter, including rotor blades

PU = pickup site

DS = delivery site

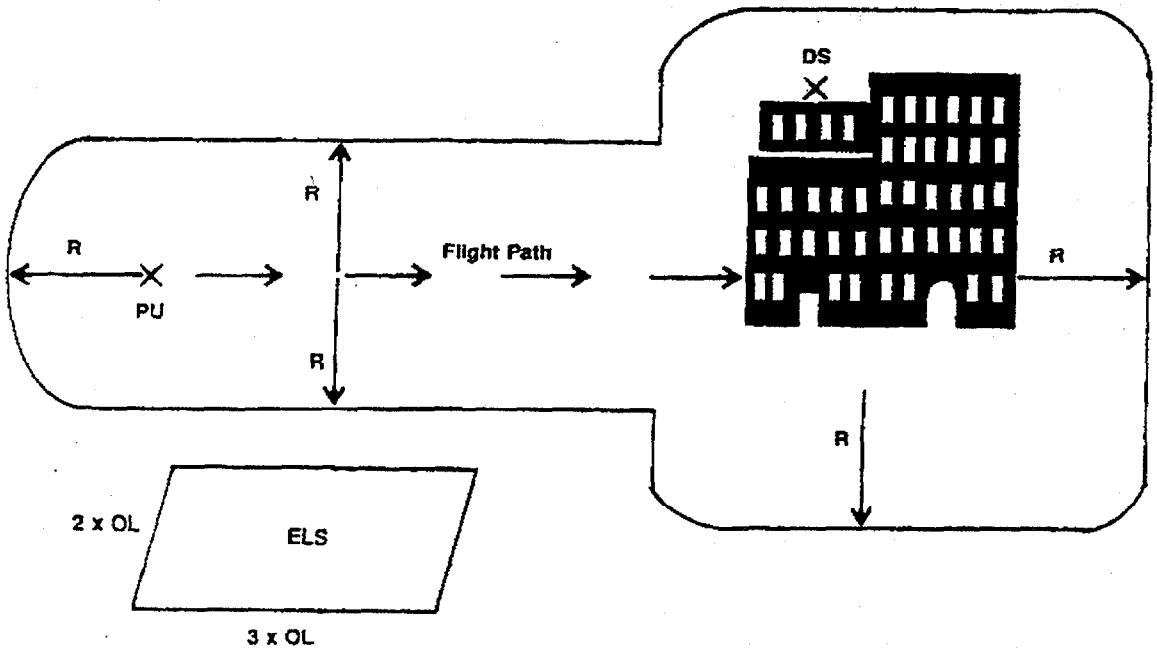
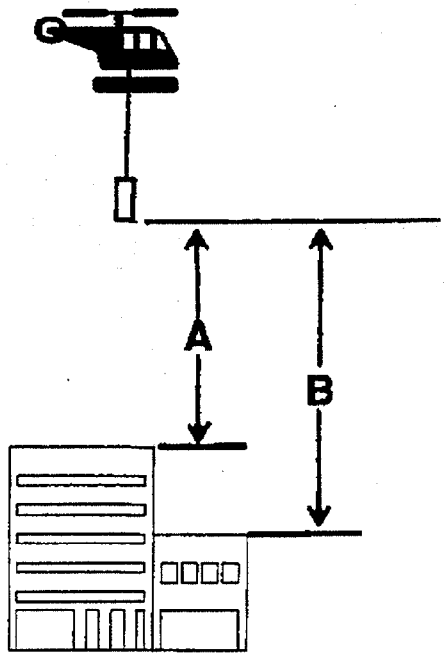


FIGURE 102-2
HEIGHT OF LOAD ABOVE BUILDING



A = The maximum height that the load will be lifted above the top of the building must be specified in the plan if the building will be occupied during the operation.

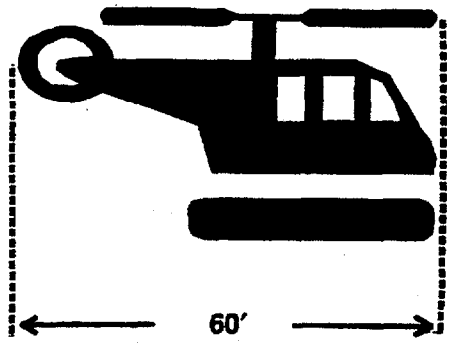
B = The maximum height that the load will be lifted above the lower tier (if applicable) must also be specified if this portion of the building will be occupied during the operation.

FIGURE 102-3
NON-AERODYNAMIC LOAD OPERATIONAL AREA

FORWARD DISTANCE BELOW ETL

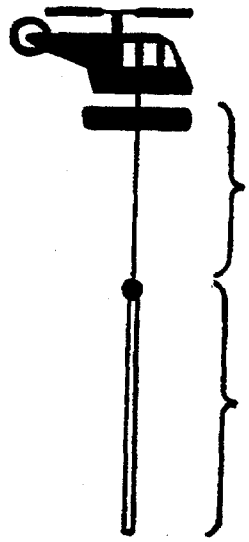
RADIUS

Use the greater of: a) 1.5 x Overall length of helicopter



x 1.5 = 90′

b) Overall length of load (including cable)



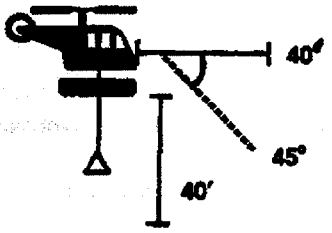
= 70′

FIGURE 102-4
NON-AERODYNAMIC LOAD OPERATIONAL AREA

FORWARD DISTANCE ABOVE ETL

Minimum of : (But not less than 3 times overall length)

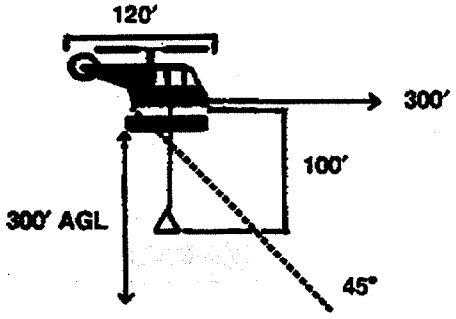
a) 45°, If helicopter altitude less than 50′ AGL



b) Equal to rotorcraft altitude above 50′ AGL

c) 3 x Overall length of helicopter

60′ x 3 = 180′



Operational Area for the above example would equal 300′ forward distance and would be depicted as:

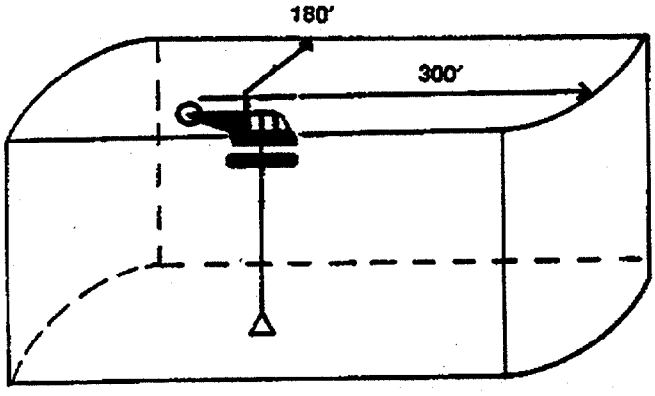


FIGURE 102-5
AERODYNAMIC LOAD OPERATIONAL AREA

RADIUS AND FORWARD DISTANCE COMPUTATION ABOVE ELT

Use the greater of:

1. Non-aerodynamic load criteria

OR

2. Altitude (AGL) of aerodynamic external-load.

Using the same criteria from the non-aerodynamic load example In Figure 102-3 and adding the following aerodynamic load, the operational area would be depicted as:

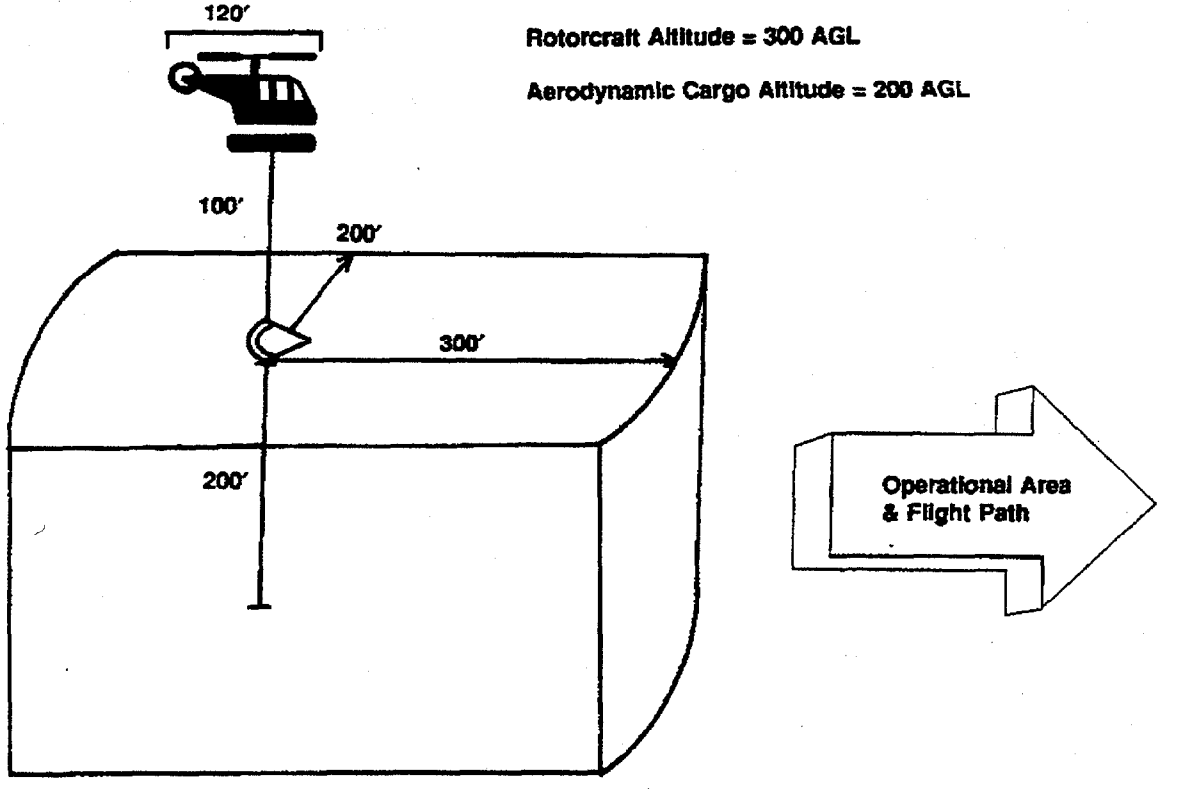


FIGURE 102-6
LETTER APPROVING CAP WITH CONTINGENCIES

FAA Letterhead

[*date*]

[*name and address of the operator*]

Dear [*name of the operator*]:

The approval of the Congested Area Plan submitted by you on [date] is confirmed.

This approval concerns the proposed operation at [*site location*] on [*date(s)*], and is contingent on [*cite contingencies as appropriate*]. Inspectors from this office will monitor the operation to ensure compliance with the approved plan.

Should you have any questions or need to submit a change to this plan, please contact this office at [*FSDO telephone number*].

Sincerely,

[*POI's signature*]

CHAPTER 103. MONITOR A PART 133 CONGESTED AREA OPERATION

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE: 1623

2. OBJECTIVE. The objective of this task is to ensure compliance with a Congested Area Plan (CAP) and with the regulations. Successful completion of this task results in an indication of compliance or noncompliance in an operator's file.

3. GENERAL.

A. Authority. Title 14 of the Code of Federal Regulations (14 CFR) part 133, § 133.39 allows the Administrator to make the inspections and/or tests found necessary to ensure compliance with the regulations. The inspector conducting surveillance performs an essential function in connection with the external-load operation.

B. Frequency of Surveillance. The operator should expect each congested area operation to be observed by an inspector. The inspector may or may not make their presence at the site known to the operator.

C. Deviation from the CAP.

(1) If the operator deviates from the CAP, it may pose a hazard to persons or property. With the exception of emergencies, deviation is not acceptable and may violate these regulations (see 14 CFR part 91, §§ 91.13, 91.119, 133.33(d), and 133.33(e)).

(2) The inspector should refer to volume 2, chapter 97, Conduct Initial Certification/Renewal of a Part 133 Operator, when concerned with deviations from a CAP for the purpose of an emergency.

(3) The inspector may approve changes to the CAP on site, if the changes meet or exceed the criteria for original approval of the plan. The inspector would note the changes on the plan, sign the change noted, indicate the date and time approved, and return the plan to the operator.

(4) The CAP submitted by the operator should contain contingency plans for as many variables as possible. With approved contingencies, the operator will not have to postpone the operation to seek Federal Aviation Administration (FAA) approval if the plan must be modified.

D. Determining the Degree of Surveillance to Conduct.

(1) The operator should expect unannounced surveillance at any given operation.

(2) Normally, a full ramp check is used when an operation reveals a discrepancy. Full ramp checks may also be conducted as a planned work activity. (See volume 2, chapter 104.)

(3) The inspector must conduct the surveillance that is necessary to determine compliance.

E. Inspector's Role During Surveillance.

(1) It is the operator's responsibility to conduct the operation according to the operator's approved CAP and 14 CFR. It is the inspector's role to monitor the operation. If an imminent violation is observed, the inspector should attempt to advise the operator to cease operations until the situation is corrected.

(2) The inspector should refer to volume 2, chapter 102, Evaluate a Part 133 Congested Area Plan (CAP), for the criteria that the operation should meet.

F. Follow-up Activities. Inspectors should debrief the operator after surveillance, with an emphasis on reinforcing acceptable performance.

(1) After surveillance of an operation, the inspector should debrief the pilot (at the scene if possible) and the operator by written report or telephone call. This is especially important if there were minor discrepancies. Minor discrepancies are noted as "I" (information) on the PTRS Data Sheet.

(2) In the event of discrepancies indicating deficient procedures, pilot proficiency, training, or equipment, the operator should be advised in writing of the deficiencies. A follow-up ramp inspection or test is appropriate. These types of discrepancies are noted as an "F" (follow-up required) on the PTRS Data Sheet.

(3) In the event of a possible 14 CFR violation, the inspector shall initiate an enforcement investigation into any violation the inspector observes or becomes aware of. A violation is noted as an "E" (enforcement action) on the PTRS Data Sheet (see volume 2, chapter 182, Conduct an Investigation to Determine Compliance).

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of part 133 and FAA policies and qualifications as an Aviation Safety Inspector (ASI) (Operations). Experience as a rotorcraft external-load pilot is preferred but not required.

B. Coordination. Coordination with airworthiness and with the local political subdivisions is required.

2. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- 14 CFR parts 1, 27, 29, 61, 91, and 133
- Advisory Circular (AC) 133.1, Rotorcraft External-Load Operations in Accordance with 14 CFR Part 133
- PTRS Procedures Manual (PPM)

B. Forms.

- None

C. Job Aids.

- Ramp Inspection Job Aid (figure 104-1 from volume 2, chapter 104)
- Approved CAP
- Tape recorder and camera
- Sample letters and figures

3. PROCEDURES.

A. Review CAP. Before visiting the operation site, review the CAP. Become familiar with the restrictions, limitations, and contingencies documented for this plan.

B. PTRS. Open PTRS file.

C. On-Site Activity. Observe the operation and note whether it is conducted according to plan. Check for the following, as appropriate.

(1) Check whether the operational area is secured (unoccupied by persons) and the radius is at least the proper minimum size for the proposed operation.

(2) Verify that the emergency landing site is secured.

(3) Check whether adequate security is available at the site.

(4) Check that the appropriate streets are blocked off.

(5) Check that required buildings (or proper portions thereof) are unoccupied.

(6) Check that the length of load plus the length of attaching means (hook and cable, etc.) does not exceed the radius of the operational area.

(7) Observe the manner in which the load is carried, picked up, and brought to a stabilized hover.

(8) Observe whether the route follows the plan, and whether the load is dragged or bumped into obstructions.

(9) Check the delivery (set) site and observe whether the height of the load above the building exceeds the CAP.

(10) Monitor pilot proficiency. The load should not oscillate excessively. In addition, evaluate pilot coordination with ground crew.

(11) Determine the quality of ground crew performance. The ground crew should give and interpret any required hand signals correctly.

D. Surveillance Results Satisfactory.

(1) It may be desirable to conduct a random ramp check. If so, see volume 2, chapter 104.

(2) Debrief the operator, if desired.

(3) Close PTRS.

E. Satisfactory Operation with Minor Discrepancies.

(1) Bring the discrepancy to the attention of the operator at the site or notify the operator by letter (figure 103-1), according to the situation.

(2) Document discrepancies to Remarks section of PTRS Data Sheet.

(3) Close PTRS.

F. Unsatisfactory Operation. If the operation was unsatisfactory and constituted a violation of 14 CFR, see volume 2, chapter 182.

4. TASK OUTCOMES.

A. An indication in the operator's file of a satisfactory operation, with or without discrepancies.

B. An indication in the operator's file of an unsatisfactory operation.

5. FUTURE ACTIVITIES.

A. Possible change in frequency of surveillance.

B. Possible re-examination of pilots involved in an unsatisfactory operation.

C. Possible monitoring of this or other operators engaging in congested area operations.

FIGURE 103-1
LETTER CONFIRMING DISCREPANCIES DURING CONGESTED AREA OPERATION

FAA Letterhead

[*date*]

[*name and address of operator*]

Dear [*operator's name*]:

NOTE to inspector: If the discrepancy resulted in a violation, this letter may be used as a letter of investigation in an enforcement action.

Certain discrepancies were noted during surveillance of the rotorcraft external-load operations conducted at [*street address, city, and state*] on [date *and time*].

- *List the specific discrepancies and, if contrary to a Title 14 of the Code of Federal Regulations (14 CFR), indicate the related 14 CFR.*
- *Indicate how the approved congested area plan was not followed.*
- *List corrective action, if any, that was taken during the surveillance.*

NOTE to inspector: If the discrepancy resulted in a violation of the 14 CFR and this letter is used for enforcement purposes, add the following:

This matter is under investigation by the Federal Aviation Administration. We wish to offer you an opportunity to discuss the incident personally and submit a written statement. If you desire to do either, this should be accomplished within 10 days following receipt of this letter. Your statement should contain all pertinent facts and any extenuating or mitigating circumstances which you believe may have a bearing on the incident. If we do not hear from you within the specified time, our report will be processed without the benefit of your statement.

Sincerely,

[*POI's signature*]

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CHAPTER 180. INTRODUCTION TO INVESTIGATION AND COMPLIANCE RELATED TASKS

SECTION 1. FAA COMPLIANCE PHILOSOPHY

1. GENERAL. This group of tasks addresses investigative techniques, acquisition of evidence, and analysis of Enforcement Investigation Reports as they relate both to the Aviation Safety Inspector (ASI) and Federal Aviation Administration (FAA) revised philosophy for achieving regulatory compliance. Specifically, this guidance applies to operations conducted under Title 14 of the Code of Federal Regulations (14 CFR) parts 61, 91, 101, 103, 105, 125, 133, 137, and 141. For detailed guidance inspectors shall consult the most recent edition of FAA Order 2150.3, Compliance and Enforcement Program, during conduct of any tasks in chapters 181 through 184 following.

A. Definitions

(1) Compliance means conforming or adapting actions to a rule or to necessity.

(2) Remedial Training (RT) is a form of FAA administrative corrective action that uses education as a tool to allow airmen who have committed an inadvertent violation to increase their knowledge and skills in areas related to the violation.

(3) "Significantly unsafe" will be defined in detail in an upcoming change to Order 2150.3. The definition will center on the difference between the potential and actual hazard created by an act of noncompliance. For example, an incident where an actual hazard was posed may require legal action, but an incident where the hazard was only potential may be better handled with administrative action.

B. Regulatory Authority. Regulatory authority for investigation of the facts surrounding an act of noncompliance or a compliant is found in Title 49 of the United States Code (49 U.S.C.) and the Airline Deregulation Act of 1978.

2. BACKGROUND.

A. Public Confidence in the FAA. Public confidence in the FAA and its enforcement policy is essential to aviation safety. Only in an environment of mutual trust and respect will pilots continue their voluntary compliance with the 14 CFR that has made this country's aviation system as reliable and safe as it is today.

(1) Mandatory sanctions may have only limited usefulness in achieving compliance. When people perceive sanctions as punitive or unfair, sanctions lose their effectiveness.

(2) Enforcement actions that airman have perceived as punitive have contributed to some undermining of the willing cooperation between airmen and FAA inspectors. The safety record as it stands was achieved through a *partnership* between the FAA and the aviation public. When mistrust intrudes, the partnership suffers, and that has serious implications for the essential, free exchange of aviation safety information. The inspector's "middle name" is Safety, but when this mis-perceived mistrust prevents the inspector's message from being heard, the FAA has to include alternative means of assuring voluntary compliance.

B. Compliance Standard. The ultimate goal, of course, is **total compliance.** The FAA and the public can accept nothing less. The inspector's public responsibility is to assure compliance with the rules and to promote aviation safety. The airman's responsibility is to comply and through compliance to participate in the promotion of safety. These responsibilities do not preclude inspectors nor airmen from being reasonable.

(1) Punitive enforcement action without consideration of the circumstances surrounding an incident cannot succeed in an environment that encourages freedom of expression and guarantees an airman's access to the aviation system. Voluntary compliance must be fostered and encouraged by the words, actions, and deeds of both airmen and inspectors.

(2) Compliance can be obtained through a variety of means, such as initial training, continuing education of airmen, counselling, and legal enforcement action. Training, education, and enforcement each have a different role in achieving compliance.

(a) Each airman must have a sound establishment in compliance during his or her initial training. Here is where attitudes toward safety and good judgement are developed, hopefully by instructors with positive attitudes themselves.

(b) Each airman must realize the importance of continuing his or her aviation education after certification in order to maintain an acceptable level of skill and to enhance knowledge of changing rules and airspace configurations.

(c) Finally, when all else fails, legal enforcement action can and must be used as a tool to achieve compliance. Legal enforcement action can range from civil penalties to suspension or revocation of airman privileges. Within this range of enforcement possibilities, the corrective action must be one that is suitable and appropriate for the occurrence.

C. Mutual Goals. Airmen and inspectors have the same goal: a *safe,* efficient airspace system. To achieve this goal, the airman uses such tools as aeronautical skills and knowledge tempered with reasonable care and good judgement. The FAA has many tools for the inspector to use as well: good communications, training, education, counselling, and, **as a last resort,** enforcement. In other words, the inspector must always be firm but also always fair.

3. CULTURAL CHANGES. To succeed in restoring the partnership between airmen and the FAA, both must undergo some cultural and attitudinal changes. By a positive change where needed in the culture and attitude of inspectors, FAA will go a long way toward a positive change in airmen.

A. Recent Changes in FAA Enforcement Philosophy. In response to concerns expressed by the aviation industry and from within FAA, the FAA Administrator announced a series of philosophical and policy changes for the FAA that have as their goal a cultural change in the way inspectors handle compliance issues. Following are some of the changes most pertinent to inspectors.

(1) The Administrator rescinded the mandatory 60-day suspension for unauthorized TCA penetrations. However, this does not alter the FAA's position that this type of occurrence is a potentially serious event. Rather, inspectors may now consider all facts and extenuating circumstances surrounding such an incident and may recommend sanctions accordingly. For example, the inspector may now recognize the different implications for safety between an inadvertent penetration of a TCA by an airman turning to attempt to avoid the TCA and the airman who willfully flies through the TCA because he or she considers it an infringement on personal rights.

(2) Inspectors may use a more flexible approach in the application of compliance procedures. The emphasis should be on the promotion of compliance through open communication and education.

(3) Inspectors are encouraged to use their personal and professional discretion and judgement in dealing with incidents of non-compliance. The inspector, with his or her professional skills and experience, is in the best position to consider all facts, circumstances, and mitigating factors. The inspector, furthermore, is the best person to analyze this information and exercise professional judgement in recommending an appropriate corrective action. A position of flexibility allows the inspector to recommend a corrective action that fits the nature of the issue.

(4) FAA will design and implement new training for inspectors that emphasizes better communications skills and interpersonal relations. Inspectors will be encouraged to approach airmen as peers who have a mutual interest and concern.

(5) The Sanction Guideline Table will be evaluated and changed to reflect a policy of rehabilitation rather than punishment. The Sanction Guide Table is designed to standardize the application of sanctions, but inspectors may deviate from the sanctions provided when it is appropriate and when the inspector can justify it with mitigating or even aggravating circumstances.

(6) FAA will establish procedures to remove information on violations from an airman's enforcement record after an appropriate time interval has passed and it is certain rehabilitation has been successful.

(7) In the enforcement process, it is absolutely essential that inspectors be open and honest with an airman about what will or can happen procedurally in an enforcement case.

B. Rehabilitation. Rehabilitation implies a restoration or a return to a former state. Rather than being a significant new change, the use of rehabilitation is actually a return to the way inspectors have dealt with certain acts of non-compliance that the inspector determined were not significantly unsafe.

(1) When an airman commits an inadvertent act of non-compliance, it is part of the inspector's role as an aviation safety professional to seek ways to restore the airman to an appropriate level of competence. Punitive action is a successful deterrent only in a narrow scope of behavior. Often it does not succeed at all in correcting behavior. The most successful method of rehabilitation is education. Once a receptive person fully understands what has happened, why it happened, and **how to prevent a recurrence,** rehabilitation is generally complete and compliance is usually assured.

(2) How does an inspector rehabilitate an airman who is in non-compliance? By accumulating and evaluating **all** information about an incident and using professional judgement in recommending counselling or remedial training for the offender. Either one or both of these options, accomplished appropriately, usually will restore the receptive airman to compliance. However, legal sanctions, accomplished when appropriate, also serve a rehabilitative function but not when they are used as a threat to impose compliance.

(3) If the FAA can achieve compliance through the use of training and education, **backed up by strong enforcement when necessary**, the public will see the obvious result--a safer airspace system.

4. AIRMAN REMEDIAL TRAINING. Automatic certificate actions or civil penalties in some instances may not be the most effective way of achieving compliance and assuring safety. Airmen involved in certain types of non-compliance may respond better to an educational experience rather than legal action. Compliance through education--remedial training (RT)--may also be a more equitable way for inspectors to deal with airmen.

A. Definition. Until recently, remedial had a negative connotation, based on an erroneous inference that those needing remedial assistance were not quite as smart as the average person. Actually, the definition of remedial includes the correction of faulty habits and the improvement of overall competence. The use of a remedial training program for airmen found in non-compliance would serve to identify faulty skills and correct them, then return to the airspace system an airman with increased competency. Contrast this with mandatory sanctions: At the end of a suspension period, the airman returned to the system unsure of why he or she had been singled out for punishment and, more importantly, without the essential knowledge of how to keep it from happening again. That same airman with remedial training could return to the system with improved skills and knowledge and **with a positive attitude toward the assistance received from the FAA in encouraging that improvement.**

B. Purpose.

(1) The FAA RT program is intended to:

(a) Bring the incident to the attention of the airman involved in a positive manner so that the airman understands why an occurrence happened and why it is important that it does not recur.

(b) Encourage future compliance through improved skills and competence.

(c) Document corrective action and provide a source of information for agency use.

(2) In addition, the remedial training program serves the purpose of achieving future compliance of certificated airmen without the unnecessary imposition of certificate or civil penalty action.

C. Eligibility. Deliberate, willful violations, which involve gross negligence, recklessness, recidivism, or flagrant disregard of 14 CFR, shall continue to be handled by the imposition of strong, legal enforcement actions. This is clearly an area where remedial training is inappropriate and would be ineffective. The RT program applies to inadvertent violations of 14 CFR, and the inspector determines the inadvertency on a case-by-case basis grounded in the inspector's investigation of the facts and circumstances of the incident. The airman's past performance and attitude toward the incident are also important factors used in determining whether remedial training is appropriate.

(1) When assessing the airman's eligibility for the RT program, the inspector must determine if future compliance can, indeed, be assured solely through remedial training. For the inspector to consider the airman eligible for remedial training, the act of non-compliance must meet the following conditions:

(a) It cannot have been deliberate, e.g., repeated buzzing of a house as opposed to an inadvertent deviation from minimum safe altitudes because of unforecast weather.

(b) The non-compliance cannot have been the cause of an accident.

(c) The non-compliance cannot have actually compromised safety, i.e., created an condition that was significantly unsafe.

(d) The non-compliance cannot have indicated a lack of qualification, which would require re-examination, on the airman's part.

(e) The non-compliance cannot have been caused by gross negligence.

(f) The non-compliance cannot have been of a criminal nature.

(2) The airman must have exhibited a constructive attitude toward safety and his or her rehabilitation and must be deemed not likely to commit acts of non-compliance in the future.

(3) Furthermore, the inspector will review the airman's enforcement history and evaluate whether that history supports or precludes participation in the RT program. Ideally, candidates should be first-time "offenders;" however, previous enforcement history does not automatically exclude an airman from the program.

(4) Finally, airmen who were exercising the privileges of their certificates for compensation or hire in air transportation when the violation occurred are not eligible for remedial training. (Refer to FAA Order 8400.10, Air Transportation Operations Inspector's Handbook.)

D. Remedial Training Process and the Inspector. Although the procedures section of chapter 182, Conduct an Investigation to Determine Compliance, will include specific procedures for the operations inspector to follow when the RT program has been selected as the compliance option, the following information will explain the role of the inspector in the process.

(1) The investigating inspector, or any other FAA personnel, does not conduct the training. The investigating inspector, based on the facts of the case, recommends that the airman may be eligible for remedial training. The inspector makes this recommendation to the FSDO's Accident Prevention Specialist (APS) (or other qualified person designated at the discretion of the district office manager), who is then responsible for interviewing the airman and designing, implementing, and monitoring a program specific to the airman and the compliance issue.

(2) The airman must complete any agreed-upon RT program within 120 days of the FAA's becoming aware of the violation. Failure to complete the RT within the time specified results in termination of the airman's participation in the program. The inspector then initiates legal enforcement action. Adverse weather conditions, unavailability of equipment, airman illness, etc., are conditions for extending the training period; however, the inspector must consider Title 49 of the Code of Federal Regulations, part 821, section 821.33, the NTSB's "stale complaint" rule.

(3) After the airman has completed the training program and provided evidence to that effect to the APS, the APS then indicates to the investigating inspector the successful completion of the training. Based on that information, the inspector issues a letter of correction to conclude the case and closes out the EIR.

(4) Once remedial training is begun, there must be a clear distinction between the investigating inspector and the APS. The APS must not be drawn into any aspect of the legal enforcement process, including discussion with the airman of the merits of the case.

(5) For a detailed description of the RT program and the role and responsibilities of the APS, consult FAA Order 8740.1, Aviation Safety Program Managers' Handbook, appendix 7.

E. Remedial Training Sources. For pilot airmen recommended training sources are as follows:

(1) Title 14 CFR part 141 schools - preferred because of their higher training standards and FAA certification.

(2) Other flight schools with adequate facilities.

(3) An appropriate Air Traffic Control facility, e.g., Operation Rain check.

(4) A Chief Flight Instructor or a Chief Ground Instructor at a flight school.

(5) A Designated Pilot Examiner.

(6) An appropriately rated flight instructor specifically qualified to give the instruction indicated by the airman's training program.

(7) An Aviation Medical Examiner.

(8) An Accident Prevention Counsellor.

(9) Military resources, e.g., physiological training.

(10) Other training resources as required.

5. INVESTIGATIVE TECHNIQUES. Order 2150.3, chapter 4, contains a detailed discussion of investigation, and those procedures shall be followed in addition to procedures in chapters 181 through 184 following. An overview of investigative techniques is included in the following paragraphs.

A. Purpose of Investigations. The sole purpose of conducting an investigation of an act of non-compliance is to develop the facts and gather evidence and circumstances of the incident in order to assure future compliance and justify rehabilitation but **not** to exact retribution. In other words, the inspector needs to gather all the information necessary to effect a "fix," not a punishment. The inspector, once he or she learns of a possible act of non-compliance, must approach the investigation with rehabilitation foremost in mind.

(1) An investigation of a specific incident seeks to discover **what** exactly did occur based on concrete facts and substantiated evidence--not innuendo or even an airman's previous history if it is unrelated to the current investigation.

(2) An investigation uncovers **why** something occurred, the aggravating and mitigating circumstances which led to what was, at the time, an irreversible event. Through that discovery of circumstances and eventual analysis of them, the inspector can help to assure that compliance is restored.

(3) An investigation reveals the appropriate **role** of the FAA in the compliance process, and the most positive role the FAA can play is that of a rehabilitator. Of course, the investigation may reveal that the appropriate role for the FAA is to enforce legal action. However, the approach to the investigation should be that the facts and evidence support either conclusion--rehabilitation or enforcement sanction.

B. Role of the Inspector. In an investigation the inspector is the primary fact- and evidence-gatherer as well as the case's analyst. The disposition of the compliance issue depends on the inspector's judgement and aviation expertise.

(1) Because the investigation must support either a recommendation for rehabilitation or a recommendation for legal enforcement action, it is incumbent upon the inspector to gather all salient facts. However, the inspector should approach the fact-finding with an attitude aimed at rehabilitating the airman, if at all possible, rather than with a presumption of punitive action.

(2) In the interest of continued aviation safety and or the success of the remedial training approach, the inspector's investigation must reveal all the evidence, including any mitigating circumstances. The deliberate omission of mitigating circumstances, especially if they would justify the rehabilitative approach, is unprofessional and unacceptable. If the inspector can find sufficient facts that indicate that remedial training is appropriate and likely to be successful in returning the airman to compliance, the inspector's choice is quite clear--opt to rehabilitate, not to punish.

(3) When seeking to rehabilitate an airman, inspectors should accept information from any source. Through later analysis the inspector can develop information which will support the inspector's recommendation.

(4) In developing information from witnesses and from the airman, the inspector must exercise his or her best interpersonal and communication skills. Information is freely provided when both communicators establish a barrier-free exchange. Verbal communication skills as well as listening skills are very important to assure that no essential item of information is overlooked.

C. Active Listening. Communication is a two-way process: speaking and listening. Much emphasis is placed on acquiring good speaking skills, especially for inspectors who have a great deal of public contact. Often, an emphasis on listening is left out, and listening is so crucial in assuring that the receiver of the communication gets the message accurately. Effective or active listening is not a pop psychologist's trick or a gimmick. It is a skill that comes from practice and from a genuine desire to know what the other person means.

(1) An inspector must gather information from many sources, but the predominant source is people. The inspector conducts personal interviews as part of an investigation, and this is often a source of a great deal of valuable information. For the information obtained in the interview to be valuable and accurate, the inspector must exercise effective listening skills. The first step toward effective listening is to stop talking.

(2) Witnesses, and especially the airman, may be nervous and apprehensive when faced with an interview with an FAA inspector. The inspector involved in this sort of personal contact represents the FAA in a "frontline position," and the inspector must accept and understand an interviewee's natural apprehension. The

inspector should assume **an attitude of quiet, active listening and helpfulness.** The inspector's demeanor should be calm, restrained, and respectful. The witnesses and the airman should respond to this behavior by being calm and respectful themselves and willing to provide all necessary information.

(3) Most of all, the inspector must truly listen for what is actually said, not for what he or she wants to hear.

6. ACQUISITION OF EVIDENCE. During the course of an investigation, an inspector accumulates evidence from a variety of sources. As with fact-gathering during investigation, the evidence accumulated must be able to support either rehabilitation or enforcement action. For example, a pilot's declaring an emergency in an appropriate situation is evidence of the pilot's good judgement and attitude. Such evidence is to be considered as appropriate justification for the inspector to opt for rehabilitation rather than an assumption that the pilot is guilty of deliberate non-compliance.

A. Types of Evidence. Some of the most essential information comes from FAA's various databases. This is objective, untainted evidence that can be easily substantiated. Other very important evidence comes from witnesses and the airman; however, this evidence, even that from witnesses, is subjective and can only be substantiated when compared with other evidence that corroborates it.

(1) Witnesses and the airman should be informed that the provision of evidence is not done under oath as in a court proceeding but that detailing the precise facts serves everybody's best interests.

(2) Written statements, signed by the provider, generally are more desirable than an inspector's notes of a witness interview. Recordings, which can later be turned into certified transcripts, are also highly desirable but must be made with the interviewee's permission.

(3) The inspector should also remember that witnesses may be acquaintances or friends of the airman in non-compliance and that the evidence they provide will show the airman in the best possible light. The approach to take is one of complete acceptance without any indication to the witness of skepticism. The inspector can always discuss irrelevant material that cannot be corroborated or conflicting information in the analysis section of the EIR.

B. Interview Technique. One of the best ways to obtain evidence from witnesses and airmen is through a one-on-one interview. The airman should be interviewed in private with just the investigating inspector present unless the airman specifically requests someone, i.e., legal assistance, to be present also. The inspector must honor this request and not attach any inferences of guilt to it. Witnesses should also be interviewed individually. This means that the inspector is more likely to obtain untainted information about what that person saw or heard. If Witness B is allowed to hear the information provided by Witness A, Witness B's account may be prejudiced by what he or she has heard. That is, the evidence will not be as "pure" as when the interviews are conducted separately. When interviewing anyone--a witness and especially the airman in non-compliance--it is important to remember that the goal to is obtain information through a free exchange and not to interrogate.

(1) An interview means a meeting where the interviewer approaches the interviewee as a peer. The interviewee is encouraged to cooperate and allowed to relate observations or information without interruption or intimidation. An interview is usually conducted informally, with a voluntary answering of questions.

(2) Interrogation means formal questioning done by someone in a position of authority or power, such as a lawyer-witness confrontation in a court proceeding or a police officer questioning a suspect. Interrogation presumes non-cooperation and an adversarial relationship. The free giving of information is sublimated by the aim of eliciting a confession. In this situation, questioning is likely to be devious, shrewd, or clever with the intention of tricking, trapping, or antagonizing the interviewee to get information at any cost. The negative connotations are obvious.

(3) INSPECTORS SHALL USE THE ***INTERVIEW*** RATHER THAN THE INTERROGATION TECHNIQUE IN THE QUESTIONING OF WITNESSES OR AIRMEN IN NON-COMPLIANCE.

(4) Generally, when people are offered the opportunity to act as witnesses and assist in aviation safety by voluntarily giving a statement or account in an atmosphere of mutual respect and courtesy, most willingly provide information. Information given voluntarily by witnesses is generally untainted and could aid in the justification for the recommendation of a remedial approach.

Tips for Active Listening

1. Stop talking.
2. Empathize with the other person.
3. Ask questions.
4. Be patient.
5. Concentrate on what the person is saying.
6. Show the other person that you want to listen and that you are listening.
7. Put the talker at ease.
8. Be aware of your emotions and prejudices.
9. Control your anger.
10. Get rid of distractions.
11. Get the speaker's main points.
12. React to ideas, not to the person.
13. Don't argue with the speaker mentally.
14. Listen for what is not said.
15. Listen to how something is said.
16. Don't antagonize the speaker.
17. Listen for the speaker's personality.
18. Avoid classifying the speaker prematurely.
19. Avoid jumping to conclusions.
20. Stop talking.

How to Destroy an Interview or Lose a Witness

WAIT. No need to contact the witness now; give the witness time to forget.

ARGUE. Especially if the witness thinks he or she is smart.

RUSH. Don't take the time to get acquainted; let the witness know by your words and actions that you can't waste time talking to him or her.

OVERREACT. Be sure to convey your values and philosophy concerning the witness response.

PHONE. Just call and ask the witness to send a statement.

BERATE. Reprimand the witness; let the witness know how dumb he or she is.

FRIGHTEN. Use words like "confession," "stool pigeon," "thief," etc.; be sure to emphasize that the witness will have to go to court.

BLUFF. Tell the witness that he or she is obligated by law to answer your questions; demand to see the witness' records.

USE LEGALESE. Impress the witness with big, legal-sounding words.

INTERROGATE. Really press the witness for facts.

BE FORMAL. Keep the witness at a distance; never befriend a witness - the witness may want to communicate.

INTERRUPT. Don't let the witness finish replying; get on with it.

ACCUSE. Convince the witness that he or she has done something wrong or you wouldn't be there.

BE IMPOLITE. The bandit deserves it.

BE RUDE. The witness' thoughts and feelings mean nothing. Anybody is stupid if he or she doesn't understand the question, so never rephrase it. Make the witness respond to what ever you ask.

TALK. Especially if the witness doesn't want to.

DON'T REPLY. After all, YOU are the Investigator.

DON'T LISTEN. Never admit you didn't understand what the witness said; the witness might think you're stupid.

INTERVIEW IN A CROWD. Especially if the witness is a hostile one; be sure everyone can hear.

BE UNINTERESTED. By all means, don't show any sympathy or empathy.

CALL THE WITNESS A LIAR. Any witness who says he or she doesn't remember is bound to be a liar.

LET THE WITNESS CONTROL. Let the witness pick the subjects and stray from the issues.

SHOW SUSPICION. Let the witness know that you know he or she is guilty from the start.

WRITE QUICKLY. Be sure your clipboard and pen are in hand as soon as the witness starts talking so you can get every word.

ASK MULTIPLE QUESTIONS. "When did you do it and why?" That should confuse the witness.

BE DISORGANIZED. Don't organize your objective beforehand; just ask questions at random; something useful will surely come of it.

PROCRASTINATE. Put it off until tomorrow. Don't set any priority on an interview; maybe it will go away.

WAIT. They'll forget, flee, lie, or die. They'll also get cooled off, told off, paid off, or laid off or otherwise be subjected to social, political, or economic pressures.

C. Evidence and Remedial Training. As mentioned above concerning investigative techniques, inspectors must approach the acquisition of evidence with the thought of rehabilitation in mind. In this light, development of the Items of Proof in the Enforcement Investigative Report will be different from what the inspector is accustomed to. Rather than listing Items of Proof that support a punitive sanction, when appropriate, the inspector should design the items to justify the option of remedial training.

7. EIR APPRAISAL. The inspector's appraisal of evidence gathered during an investigation of an act of non-compliance is reflected in a section of the Enforcement Investigative Report. Sections 2 through 5 contain detailed discussions about the preparation of an EIR. The following are some important points requiring emphasis.

A. Section C, Items of Proof. Order 2150.3 describes the physical format of the Items of Proof and shall be followed. Because of the misconception about mitigating circumstances, inspectors often omitted material that should have been included in Items of Proof.

(1) Items of Proof should support or refute the existence of an act of non-compliance, not attempt to justify the sanction.

(2) Before writing down the Items of Proof, the inspector should approach the process with the premise that rehabilitation is best but *only when it is appropriate.*

(3) Even though remedial training may be the recommended corrective action, the airman may not complete the remedial training or the inspector, after further analysis, may decide to conclude the case with legal action. The development of the Items of Proof, then, must be able to support either outcome, as per paragraph 6C.

B. Section D, Facts and Analysis. This section should be used by the inspector to justify a corrective action that goes outside the sanction guide table. Here an inspector can justify why the inspector believes a sanction should be less than what is indicated in the table or greater than what is indicated. Again, the inspector must approach this analysis armed with all possible information that can "prove the case." If the sanction the inspector recommends is outside the guidelines of the sanction table, there must be an adequate explanation why this is the appropriate course.

(1) When describing mitigating circumstances, the inspector must thoroughly describe the extent to which those circumstances suggest that the occurrence may not have been actually unsafe. In other words, how do those circumstances offer a "fix" for the situation?

(2) The same holds true for aggravating circumstances. If an act of non-compliance is so deliberate, so willful, or created such a significantly unsafe condition, the inspector may recommend a sanction that exceeds what is suggested in the table. The description of the aggravating circumstances must be sufficient to support the sanction. In either case--describing mitigating or aggravating--the inspector must be objective and never vindictive.

C. Citing of 14 CFR § 91.13 {91.9}. In the past inspectors have included 14 CFR § 91.13 **{91.9}** in FAA Form 2150-5, section A, block 18 as a "catch-all" citation to preclude administrative action. The presumption has been that any act of non-compliance is careless or reckless without any consideration of mitigating circumstances.

(1) Because of mitigating circumstances, it is possible for an inspector to determine that an airman operated an aircraft in a careless manner which potentially endangered persons and property and also find that a significantly unsafe condition did not exist. For example, a minor controlled airspace incursion would potentially endanger others, but because of the absence of conflicting aircraft, an administrative action rather than a legal action may be more appropriate When inspectors cited 14 CFR § 91.13 **{91.9}** they often relied on the circumstances of the occurrence or their analysis to support it. However, inspectors should state in their analyses (section D of the EIR) the basis upon which include 14 CFR sections are cited. Because of the perceived sensitivity of 14 CFR § 91.13 **{91.9}**, inspectors must, when citing a violation of 14 CFR § 91.13 **{91.9}** in conjunction with violations of other sections of 14 CFR, analyze **in a separate area of Section D** how the allegations support the finding that an airman acted in a careless or reckless manner.

(a) The inspector must specifically show **how** there was endangerment of persons and/or property.

(b) The inspector must also show **how** the inspector determined that the careless or reckless

operation created a condition that was significantly unsafe, i.e., did the condition pose an actual hazard rather than a potential one?

8. SPECIAL EMPHASIS PROGRAMS. It is the policy of the FAA generally to avoid instituting mandatory sanction programs. However, at times special situations arise which dictate the need for stepped up enforcement through increased sanctions to bring about compliance in certain areas where normal compliance programs, including remedial actions, are ineffective. Therefore, when necessary to reduce an elevated or critical incidence of non-compliance, special emphasis programs may be instituted on a national or local geographical basis. They will be instituted nationally by a joint determination of Flight Standards Service and the Office of the Chief Counsel. Regionally, the determination shall be made jointly by the Flight Standards division and Assistant Chief Counsel.

A. Predetermined Sanctions. Cases affected by these programs which raise initial enforcement actions to a predetermined sanction (e.g., 60-day certificate suspension for beach buzzing in a certain area of concern) will remain subject to later modification based upon presentation of mitigating factors or other extenuating circumstances.

B. Use of Special Emphasis Programs. Special emphasis programs may be used when it has been determined that the increased sanctions should bring about compliance, that the results are measurable, and that upon return to normal or non-critical status in the area of concern the programs will be discontinued.

C. Publicity. Before instituting a special emphasis program, adequate publicity regarding the program must be given through such means as letters to airmen, pilot forums, news media, etc. Also, a tracking method must be instituted to measure the ongoing results until termination of the program.

SECTION 2. COMMON PROBLEMS WITH EIR PREPARATION

1. GENERAL.

A. Advisory Information. The material in sections 2 through 5 is informational and advisory only. Inspectors shall refer to the most recent edition of FAA Order 2150.3, chapter 9, for specific procedures on filling out FAA Form 2150-5.

B. Philosophy. Every inspector knows that a violation is not really proven until or unless it is adjudicated. Therefore, unless the inspector is absolutely certain that there is evidence to prove that a violation exists, the inspector should not allege that it does. To think or to report or to "play Monday morning quarterback" and say that someone is in violation of a 14 CFR is as easy as writing one's name. To know that a violation exists the inspector must be able to write a Summary of Facts of what that person did or did not do based on the wording of the rule. The inspector must also be sure that the inspector has the evidence to prove it.

2. VOLUNTARY SELF DISCLOSURE PROGRAM. The preliminary analysis of the Voluntary Disclosure Program as instituted in 1990, indicates that some changes in how the information is entered into the enforcement information subsystem (EIS) needs to be clarified. Also, there is a new requirement for adding a FIX CODE for the comprehensive fixes that are incorporated. The information that follows is the requested way to enter information into EIS for Voluntary Disclosure cases:

A. Block 18 Regulations Believed Violated: If more than one regulation is cited, list them in order of importance. The primary 14 CFR violated should be listed first.

B. Fix Codes: The new FIX CODES and their definitions are contained in figure 180-1. These codes should be entered in the first line of the "corrective action plan" block of the Self Disclosure Enforcement Investigative Report (EIR) Attachment. Again, enter the fixes in order of importance with the primary fix being entered first.

C. Program Tracking and Reporting Subsystem (PTRS): The changes that were incorporated in EIS for Voluntary Disclosure have eliminated the need for ACIEP to be entered in the National Use block of PTRS.

3. MISCELLANEOUS INFORMATION.

A. Follow up letters need not be sent to AFS-500. These are for your records to show that follow up action was accomplished on the comprehensive fixes.

B. Remember, when entering information in the Enforcement Investigative Report Attachment that any reference to the certificate holder should be deleted. Included in this would be a program name that would be unique to the certificate holder or the name of an inspector assigned to the certificate holder.

4. THE PROBLEM. Regional review of enforcement investigative reports (EIR) has revealed many discrepancies which could indicate a lack of inspector understanding of the 14 CFR and compliance program procedures.

A. Transition. The recent influx of large numbers of inspectors from industry and the military has presented a FAA a unique problem in transition. A person hired into the FAA from an industry position can go quickly from being responsible for compliance to being the "enforcer." Similarly, inspectors from military backgrounds find FAA's voluntary compliance concept is quite different from the military method. Sometimes, this is a difficult transition to make, and many inspectors require a period of time to adjust to their new enforcement roles.

B. Regulation Phraseology and Compliance Procedures. Title 14 CFR, with their complex legal phraseology, contributes to the difficulty the new inspector has with compliance job functions. Furthermore, the numerous, complex procedural requirements for investigating and reporting violations may have become stumbling blocks that hamper effective processing of compliance cases.

C. Common EIR Errors. The following are some common errors found in EIR's.

(1) Inclusion of related case numbers when cases were actually unrelated.

(2) Transmittal of related cases to the region separately.

(3) Omission of the full names of legal entities, including d/b/a's.

(4) Omission of Enforcement Information System (EIS) data on airmen or operators.

(5) Citing regulations that are not enforceable.

(6) Citing regulations that were not applicable to the operation.

(7) Omission of applicable 14 CFR subsections.

(8) Omission of cited regulations from the Summary of Facts or inclusion of regulations not cited in the Summary of Facts.

(9) Not including a separate page on each 14 CFR violated in the Summary of Facts, when appropriate.

(10) Preparation of a Summary of Facts that is too lengthy or which strays from the facts.

(11) Not constructing the Summary of Facts around the wording of the regulation.

(12) Not supporting the Summary of Facts with proving evidence.

(13) Not identifying in the Summary of Facts who, what, when, where, why, and how, as appropriate.

(14) Not arranging Items of Proof in a logical order.

(15) Defacing of original Items of Proof and photographs.

(16) Omission of photographs when they are needed as prime evidence.

(17) Not including all evidence referenced in the file.

(18) Omission of a statement signed by the inspector indicating that pertinent personal knowledge is omitted.

(19) Not including all pertinent facts, circumstances, and exhibits in section D.

(20) Not referencing supporting exhibit numbers in the Facts and Analysis.

(21) Omission of facts in section D so that the case history is incomplete.

(22) Omission of an analysis of how safety was affected.

(23) Not considering the reliability of the evidence.

(24) Omission of considerations concerning the airman's attitude, enforcement history, and economic and livelihood situations.

(25) Not analyzing and evaluating conflicting evidence.

(26) Ignoring mitigating and aggravating circumstances.

(27) Ignoring the airman's statement of denial.

(28) Ignoring the "stale complaint rule" on recommended suspension actions.

(29) Taking unauthorized administrative actions.

(30) Omission of material from the evidence that proves that the aircraft was operated or who was pilot-in-command.

(31) Omission from the analysis of a conclusion and a recommendation for action and sanction.

(32) Errors in dates, times, places, names, numbers, and signatures.

D. Cause and Effect. When supervisors, managers, or regional personnel seek corrections of EIR's, field inspectors have become disappointed and discouraged with the compliance program in general and with their supervisors and regional personnel in particular. However, when regional counsel is unable to take action because of insufficient evidence, inadequate reporting of facts, or incomplete analysis, regional personnel share the inspector's disappointment and discouragement. Reactions have been indignant and accusatory.

(1) There is cause and effect for every problem. The effects in this case have been cited above. Humans try to solve problems by attacking the effects of the problems without attention to the cause. The cause here seems to be some inadequacies in understanding and working with 14 CFR, and changing that situation goes a long way toward mitigating the effects.

(2) We have continually fought the effects of this problem by correcting errors as they occur. The objective of this section is to get to the cause of the problem and attempt to correct it. A better understanding of the regulations and procedures and of the inspector's duties and responsibilities should help us improve on work that is already exceptional.

(3) No one is perfect, and none of the laws inspectors work with are perfect. It helps to think of

ourselves as somewhat less than perfect, working with laws written by people as equally imperfect as we are.

E. The Solution. The primary thrust of the information that follows is to provide a background on how to analyze and work with 14 CFR and compliance procedures properly. It also provides a standardized format for preparing EIR's. The result should be higher quality reports prepared in less time. Conscientious use of the information that follows should result in successful processing of compliance cases. Each inspector must keep in mind the following during compliance investigations:

(1) Conducting a thorough, timely, and intelligent investigation or search for the truth.

(2) Inclusion of a knowledgeable analysis of the regulations believed to have been violated.

(3) Inclusion of a concise Summary of Facts of each violation based on the wording of the rule.

(4) Thoughtfully gathering and producing a logical listing of Items of Proof.

(5) Provision of a complete, factual case history, written in chronological order and based on all the facts and circumstances in the Items of Proof.

(6) Preparation of an expert evaluation and analysis of the facts, circumstances, and back-ground information, including the inspector's opinions, to fill gaps and help regional reviewers to understand what the appropriate actions and sanctions should be.

5. EIR RESPONSIBILITIES.

A. Inspector Responsibilities.

(1) Inspectors are responsible for having the knowledge, skill, and ability to counsel and instruct the general public, the aviation public, and the aviation industry on the accepted methods of compliance with 14 CFR.

(2) Inspectors are also responsible for preventing violations of regulations whenever possible. One way to assure this is through the certification process where an inspector assures that airmen, air agencies, and air operators are in full compliance with 14 CFR before issuing any certificate, rating, or authorization.

(3) Inspectors also ensure that all applicable persons comply with the regulations on a continuing basis through a thorough and systematic surveillance program.

(4) If, during the performance of any of these duties, the inspector finds or becomes aware of any violation of 14 CFR, the inspector must investigate and report according to Order 2150.3.

B. Discharging Compliance Responsibilities. Inspectors must remember some very important issues when carrying out compliance responsibilities.

(1) Title 14 CFR are the minimum standards for aviation safety. Inspectors can and should encourage compliance with the highest possible standards; however, when it comes to enforcement, the inspector can only require compliance with the regulation, precisely as it is written.

(2) Regulations are sometimes permissive, sometimes restrictive. Restrictive regulations are enforceable; permissive regulations are not. If the regulation does not specifically say a person cannot, then a person can. This is not to say that either the stringent or lenient understanding of 14 CFR should always be followed. Rather, the FAA's compliance program shall not be used for a reprisal against those in the public who are uncooperative so long as they are in compliance. Neither is the FAA an instrument to enforce the "pet peeves" of an individual inspector or office On the other hand, inspectors *shall not:*

(a) "Wink" at the enforcement of regulations they do not like or do not understand.

(b) "Shrug" at regulatory standards with which they do not agree or at the failure of "good guys" to comply.

(c) Have "double standards" for those who are friendly or hostile to "The Cause"--aviation safety.

(3) However, inspectors *shall:*

(a) Always be mindful of the difference in being nosy and investigating, and use the latter to establish guilt or innocence and to find both mitigating and aggravating circumstances.

(b) Be objective, i.e., report what he or she finds, both bad and good--the good in those whom the inspector finds offensive and the bad in those the inspector likes.

(c) Leave the final sanction to those who must decide it on a national or equalizing basis, but be sure to give those individuals the basis for sound decisions in the technical analysis.

(d) Include the inspector's feelings, opinions, and conjecture in the analysis, clearly separating them from the facts.

(e) Report what the inspector must instead of what the inspector wants; be detached and not emotionally involved.

(f) Take a positive, objective approach, not wasteful of diminishing resources, and always considering safety; keep in mind that proper regulation and promotion of the aviation industry are the same thing.

(g) Try to avoid emotional reporting. The inspector should always read what he or she wrote in aggravation after a "cooling off" period, and see if it still reflects a true and accurate picture of the event. Consultation with other inspectors and the supervisor can sometimes be very effective, provided the inspector is willing to take the advice given. If the inspector is unwilling to accept that advice, his or her investigatory and reporting problems are likely to multiply.

C. Unit Supervisor and Reviewing Principal Inspector Responsibilities. The compliance program is one of FAA's most important programs and must be kept in its proper perspective. Immediate supervisors are responsible for assuring that their inspectors are trained and given proper guidance in the investigation and reporting of violations. They are also responsible for:

(1) Assigning the best qualified, available inspectors to investigate and report on violations.

(2) Tracking the investigation and reporting process to assure timely progression.

(3) Assisting inspectors during the investigation and reporting process by giving advice and counsel and by acting as "the devil's advocate" to test the case for quality assurance.

(4) Carefully and thoroughly reviewing each EIR to be sure it is prepared in accordance with national and regional guidelines. The review shall include a reference to and an analysis of each 14 CFR cited in section B. This "look in the book" is absolutely essential to assure that a violation has indeed occurred and that there is evidence in the file to support all applicable elements of the rule.

D. District Office Manager Responsibilities. District office managers have overall responsibility for effectiveness and propriety of the compliance program in their districts. Among those responsibilities are the quality and timeliness of each investigation and its corresponding report.

(1) During the final district office review of the EIR the manager should, as a "double check," compare each 14 CFR cited with the actual regulation. This assures the applicability of each and also that the evidence is available to support the case.

(2) When the manager finds the file to be acceptable but with something in it that may be questionable or may need clarification, the manager should consult with the appropriate unit supervisor. The manager should note the consultation on a "buck slip" or reminder memo and attach that to the file.

(3) The manager's signature is the only one required on the report. The manager assumes full responsibility for the report when signing it.

E. Flight Standards Division Responsibilities. The Flight Standards Division in each region is responsible for reviewing all EIR's to determine their adequacy and completeness. The division may:

(1) Accept the case as is and forward it to the Regional Counsel.

(2) Call the district office and ask for more information or evidence.

(3) Return the file for further investigation or rewrite or for downgrading to a "no action" or administrative report.

(4) Revise the report as necessary to provide the adequacy and completeness needed, including the addition or deletion of regulations believed violated and the changing of the recommended action and sanction, before forwarding it to the regional counsel.

F. Regional Counsel Responsibilities. The Regional Counsel reviews the case for sufficiency of evidence and appropriateness of sanction. If they find insufficient evidence or any other deficiencies in the report, they are supposed to coordinate any corrective action through the flight standards division. However, regional counsel may contact the reporting inspector to discuss the case and ask for clarification, availability of additional evidence, etc.

G. "Ownership" of the Report. Pride of authorship is natural, and all inspectors should take pride in the work they do. However, this feeling has been known to be so strong as to cause anger, frustration, and hard feelings between inspectors and supervisors, regional specialists, and regional counsel when the inspector disagrees with changes. It can be readily seen from the responsibilities listed above that each party concerned has his or her "day" with every report processed. Every

EIR should be considered a "One-FAA" report that is produced through a cooperative, coordinated, *team* effort.

(1) The unit supervisor may request changes or make changes in a report to assure that it complies with current guidelines. When it is accepted by the supervisor, the report becomes the unit's report.

(2) The district office manager has every right to request changes or make changes in a report. For example, if the manager finds an inspector's or a supervisor's statement that could result in an embarrassment to the FAA, the manager may change or delete it. When the manager signs the report, it becomes a product of the district office. When it is a quality report, everyone in the office should share in the pride of it.

(3) When the flight standards branch reviews the report and signs it, the report becomes a flight standards division report.

(4) When regional counsel prosecute the case, it becomes a completed FAA report. Regional counsel are the custodian of the report once they accept it. If anyone requests any information contained in the report after regional counsel accept it, he or she must go through regional counsel to obtain it.

(5) Inspectors should never become so emotionally attached to a report that they become extremely upset with anyone else for trying to make it a better report or for closing it out with no action.

FIGURE 180-1
VOLUNTARY DISCLOSURE FIX CODES

100---Program/Procedures

101--Technical: All technical programs/procedures that are either approved or accepted by the FAA.

102--Administrative: All company related manuals. (personnel policy, logistic support, ground fueling etc.)

103--Training: When a change to a required training program is made or a new training program is initiated.

104--Automation (software): When enhancements are made to existing computer programs or the addition of a computer program.

200--Equipment/Facilities

205--Automation (hardware): New computer system is added or existing equipment is repaired, or modified or the addition of more equipment to existing system. (Ground Based)

206--Test Equipment: Addition and or repair of NDI, Avionics, Aircraft system test box, etc.

207--Training: Adding simulators, training aids, audio visual equipment, etc. Modification of training facilities.

208--Aircraft: Used when the addition of A/C spare parts is the fix or fleet campaign, E.O.'s, E.A.'s, A/C modifications, etc., are used as part of a comprehensive fix.

209--Ground Equipment: Used for the addition or repair/modification of A/C stands, power units (electric, air, hydraulic) tools.

210--Housing: Used when there is a change to the facilities that flight and/or maintenance operations occupy or use.

300--Personnel

311--Organization: Used for changes and additions to staffing, structure, responsibilities, and authorization.

312--Action: Used for individual disciplinary action and transfers initiated by the company to correct the problem.

313--Training: Used when training is the fix such as remedial or additional training in a system or procedure is required.

FIGURE 180-2
SELF DISCLOSURE INSPECTOR/CLERICAL CHECKLIST

This checklist should remain with the Self Disclosure package until it is completed and should then be removed and discarded by the reporting inspector.

____1. Upon verbal notification of self disclosure, complete the "FAA ACKNOWLEDGMENT OF RECEIPT OF CERTIFICATE HOLDERS INITIAL NOTIFICATION OF SELF DISCLOSURE" form. Send original to the certificate holder and keep one (1) copy for file.

NOTE: An extension to the 10 calendar day time limit referenced in item 1. above may be given if requested by the certificate holder. However, in accordance with advisory circular 00-58, a detailed description of the comprehensive fix should be provided in writing to the principal inspector within 30 calendar days.

____2. Determine, to the extent possible, that no FAA investigation is already underway.

____4. Open appropriate administrative action PTRS entry in the computer.

____5. If the proposed fix is acceptable, send a Letter of Correction to the certificate holder.

NOTE: Letter of Correction is to be signed by the principal inspector. In his absence, his designee will sign.

____6. Complete 2150-5 in the computer and print out a copy for the file. The date of the Letter of Correction is the date of use for close out of the 2150-5.

____7. Following issuance of the Letter of Correction, close the PTRS entry referenced in item 4. above. Closing date of the PTRS entry will be the date on the Letter of Correction.

____8. Schedule the follow-up action required by guidance by opening a new PTRS record ID number with the appropriate call-up dates. This can be done by entering the appropriate PTRS activity number in the "Triggers" section of the PTRS entry referenced above. This will open a new record and tie both together in the software.

Each copy shall include:

-- FAA form 2150-5

-- Inspectors Summary of Facts (Section B)

-- The "FAA Acknowledgment of Receipt of Certificate Holder's Initial Notification of Self Disclosure" form

-- Certificate holder's written report

-- Copy of Letter of Correction

FIGURE 180-3
2150 SELF DISCLOSURE WORKSHEET

REPORT NUMBER _____ RELATED NUMBER _____

SELF DISCLOSURE Y SD IDENTITY CODE > ___

6. CERTIFICATE TYPE > ____

EQUIPMENT TYPE > ____ 9. MODEL AIRCRAFT_____

13. DATE OCCURRED / / 14. TIME _____

15. DATE KNOWN TO FAA / /

18. REGULATIONS VIOLATED (primary first)

1. _____, 2. _____, 3 _____, 4 _____

19. TYPE_____ 20. SUB-TYPE_____

21. CATEGORY_____ 23 ACCIDENT ASSOCIATED_____

DATE FAA ACCEPTED PLAN / / (DATE OF LETTER OF CORRECTION)

PROBLEM CODE_____

FIX CODE 1. ____, 2. ____, 3. ____, 4. ____

(List primary first)

CORRECTIVE ACTION PLAN (1200 Characters maximum)

_____

_____

_____

_____

_____

_____

_____

_____

_____

25. TYPE ACTION > ___ 26. SANCTION > _____

27. DATE > / / (Date 2150 is printed)

FIGURE 180-4
FAA ACKNOWLEDGMENT OF RECEIPT OF CERTIFICATE HOLDER'S INITIAL NOTIFICATION OF SELF DISCLOSURE

I, _____ of the Kansas City Flight Standards District Office hereby acknowledge receipt of the verbal report stating that a violation of Federal Aviation Regulations may have occurred on aircraft N_____ (involving)_____

The referenced finding was immediately disclosed to me on

(Date)_____ at (Time local)_____by the

Following Company official:

NAME:_____

POSITION:_____

PHONE:_____

AT THAT TIME, THE ABOVE NAMED COMPANY OFFICIAL ADVISED ME OF THE IMMEDIATE STEPS TAKEN TO CEASE THE CONDUCT THAT RESULTED IN THE APPARENT VIOLATION AND STATED THAT AN INVESTIGATION IS UNDERWAY TO DETERMINE WHAT REMEDIAL ACTIONS MAY BE NECESSARY TO PREVENT A RECURRENCE OF THE FINDING.

In accordance with Advisory Circular 00-58, Voluntary Disclosure Reporting Program, this acknowledgment will serve in lieu of a letter of investigation. However, should we discover prior to receipt of your written report, that the apparent violation was already under investigation by the FAA, we will notify you and proceed with that investigation and this self disclosure will be denied. We expect your complete written report of this incident including a detailed description of the proposed comprehensive fix outlining the planned corrective steps within 10 calendar days of this Initial Notification.

I have assigned the following inspector to assist in verifying the facts associated with the finding and in preparing the appropriate investigative package:

NAME:_____

FAA OFFICE:_____

PHONE:_____

PRINCIPAL INSPECTOR:_____

FAA OFFICE:_____

DATE:_____

SIGNATURE:_____

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SECTION 3. GENERAL INFORMATION AND BACKGROUND ON EVIDENCE

1. GENERAL. Evidence includes all the means by which any alleged fact, the truth of which is determined by investigation, is established or disproved. As it relates to FAA legal enforcement action, evidence is the means by which inspectors prove or establish the facts set forth in legal notices, civil penalty letters, etc.

A. The Law of Evidence. The law of evidence is quite complex, and regional counsel have the primary responsibility for determining acceptability of evidence. However, the inspector must have a general understanding of the requirements imposed by the law of evidence. All too often, evidence that was available at the time of the initial investigation is not always available several months later. Thus, a failure of the inspector to recognize a lack of acceptable evidence in the report may well prove ruinous to the case. The following information should provide a basic understanding of the law of evidence.

(1) The law of evidence is a body of rules which excludes from consideration (by a judge, jury, or hearing examiner) certain kinds of evidence.

(2) Evidence which is deemed to be misleading, unrelated, or unimportant is not considered when adjudging the case. In other words, certain types of evidence have been determined to be untrustworthy or so remote in likelihood as to be not admissible, i.e., worthy of consideration.

B. Admissible Evidence. In general, evidence is admissible only if it is **all** of the following:

(1) Relevant, i.e., logically related to an issue in the case.

(2) Material, i.e., importantly related to an issue in the case.

(3) Competent, i.e., of a generally reliable nature.

C. Purpose of Evidence. FAA must have acceptable evidence in support of all alleged facts in order to take legal enforcement action.

2. EVIDENCE.

A. Forms of Evidence. Evidence may be properly presented in any combination of the following forms. The investigation report will, of course, only include the latter two forms

(1) Testimonial evidence is information provided by witness testimony while the witness is under oath.

(2) Documentary evidence consists of written information of any kind.

(3) Real evidence consists of physical items or objects which are presented for examination and inspection.

B. Kinds of Evidence.

(1) Direct evidence tends to establish one or more of the principal facts at issue without the need to refer to evidence of any other fact. It is generally considered in terms of any eyewitness who has actual knowledge of a fact at issue by means of the witness' senses. For example, suppose a case in which the landing gear of an aircraft collapsed during landing roll-out, and the inspector is attempting to determine if the pilot is at fault. The testimony of the co-pilot that the pilot inadvertently raised the gear handle would be direct evidence.

(2) Circumstantial evidence consists of collateral facts, that is, a fact other than the fact at issue. The fact at issue may be inferred from the collateral fact alone or with other collateral facts. To continue the landing gear example, evidence that the landing gear system was in perfect operating condition just before the incident or that nothing in the wreckage suggested equipment failure would be circumstantial evidence of the pilot's culpability. The inspector can infer that a mechanical malfunction is not a possible cause of the incident and, therefore, that the gear must have come up because of action of the pilot.

(a) Circumstantial evidence may be extremely useful in explaining, corroborating, and evaluating direct evidence. Indeed, inspectors use it all the time. When the inspector is faced with a conflict between two witnesses and accepts one version of the incident rather than another, the inspector bases that judgement on the surrounding circumstances. For example, the inspector may conclude any of the following:

i. That a witness is not to be believed because that witness described an aircraft performing a maneuver which is physically impossible.

ii. That the witness had no real opportunity from the witness' physical location to observe the facts the witness has related.

iii. That real evidence indicates that the witness is in error.

(b) Inspectors must remember that whenever circumstantial evidence affects the investigation or evaluation of the direct evidence in a case, the circumstantial evidence shall be included in the report. As a rule of thumb, the inspector should consider whether any fair-minded person could disagree with the inspector's interpretation of the facts. If so, the inspector should look for any additional evidence--perhaps circumstantial--which might foreclose that possibility.

(c) The lack of eyewitnesses to a particular violation should not necessarily eliminate the possibility of establishing the violation by acceptable evidence. Many successful cases, particularly in the area of violations of 14 CFR part 43, are based entirely on circumstantial evidence. However, the inspector must use a lot of imagination and hard work when using inferences to establish a violation.

(3) There is no important difference between admissibility of these kinds of evidence. For the most part, the same rules of exclusion apply to both. The distinction between direct and circumstantial evidence is mentioned here primarily to alert the inspector to the value of evidence other than that directly concerned with the facts at issue.

3. MISCELLANEOUS INFORMATION.

A. Effective October 1, 1997, AFS-500 no longer issues EIR numbers for Self Disclosures. All Self Disclosure enforcement should use local EIR numbers.

B. Follow up letters need not be sent to AFS-500. These are for your records to show that follow up action was accomplished on the comprehensive fixes.

C. Remember, when entering information in the Enforcement Investigative Report Attachment, that any reference to the certificate holder should be deleted. Included in this would be a program name that would be unique to the certificate holder or the name of an inspector assigned to the certificate holder.

4. THE RULES OF EXCLUSION AND HEARSAY. The general rule is that in order for evidence to be admissible, it must be relevant, material, and competent. Of the various exclusionary rules, the one most frequently encountered, and most difficult to understand, is the rule against **hearsay evidence**.

A. Hearsay. Hearsay evidence is defined as any statement made out of the presence of the court or hearing which is offered to prove the truth of its contents. For example, a witness testifies that his daughter saw an aircraft fly 50 feet over his house. If this testimony is offered to prove the truth of the daughter's statement (that the aircraft did fly that low over the house), then the testimony is hearsay.

(1) Hearsay can be thought of in terms of the testimony of an observer to events versus the testimony of a non-observer. If a non-observer's testimony is given as a statement made to the non-observer by the observer, then the testimony will most likely be considered hearsay.

(2) As a general rule, hearsay is not considered to be competent evidence and, therefore, is not admissible to prove a fact. The reason for this rule is that there is no real opportunity for the other side to cross-examine the witness. Thus, the non observer would only be able to testify as to what the observer told the non-observer. In such a case, the capacity and memory of the person who actually observed the event cannot be tested by cross-examination.

B. Exceptions to the Hearsay Rule. There are a number of important exceptions where hearsay evidence is admissible. These are situations where the law considers that there is a special guarantee of trustworthiness even though there would be a lack of opportunity to cross-examine. Principal among these exceptions are the following:

(1) One exception is **when hearsay is considered original evidence**, i.e., any statement made out of the presence of the court or hearing which is offered in evidence for some relevant purpose other than to provide the truth of its contents. For example, a witness testifies that a mechanic told an owner of an aircraft that the annual inspection was overdue. If offered to prove that the inspection was overdue, then the testimony would be hearsay. However, if offered to prove merely that the statement was made to the owner, then the testimony would be original evidence.

(2) Another exception is admissions. Where the observer is the party in the case, of course, there is no reason to apply the rule of cross-examination, since one cannot claim the right to cross-examine oneself. For example, in an enforcement action against a pilot, the pilot is usually both an observer and a party. If the pilot relates facts about the incident to a bystander, the pilot cannot later complain that the bystander's testimony is hearsay. Hence, the bystander will be allowed

to testify as to what the pilot said. Because of this rule, it is important that the inspector determine if the suspected violator has made any statements to others concerning the event. Statements so made can be an important part of the report.

(3) One more exception is **declaration against interest**. The right to cross-examine the actual observer may also be dispensed with when the observer is unavailable at the time of trial and where the statement the actual observer made to the bystander is in some way detrimental to the actual observer's own interest. Under these circumstances, the bystander can testify to the facts related by the observer. For example, two aircraft nearly collide and enforcement action is taken against pilot A. If pilot B had remarked to a bystander that pilot B had deliberately left the assigned altitude to buzz pilot A, the bystander could testify to this conversation in A's trial, IF pilot B were unavailable to testify. This exception to the hearsay rule derives from the notion that pilot B's statement, being self-incriminating, is not likely to be a fabrication. It, therefore, has a certain degree of reliability.

(4) The last exception is **Res Gestae**. This principle covers the situation where the observer's statement to the bystander is a spontaneous declaration made during the excitement of some dramatic event. For example, a passenger emerges from airplane wreckage and tells a bystander that a fire started in the number two engine. The bystander can testify to this statement at the hearing, on the theory that the passenger (observer) was swept up in a dramatic event and did not have time to fabricate the story. This indication of reliability, as in the declaration against interest, makes up to a degree for the lack of cross-examination of the observer. Inspectors should be on the lookout for bystanders who may have overheard spontaneous statements made by people directly involved in an occurrence.

C. Written Statements and Hearsay. Since most written statements are made out of the presence of the court, it follows that they are hearsay if offered to prove the truth of their contents. Of course, it is impossible to cross-examine a piece of paper. The apparent impact of this is quite significant.

(1) The following documents are all hearsay:

(a) An official weather report.

(b) Agency maintenance records.

(c) Company records and logs.

(d) Investigator's reports.

(e) Written statements of eyewitnesses.

(f) Air traffic records.

(g) Flight Progress Strips

(h) flight plans.

(2) While the person who actually made the observation recorded in these documents could appear and testify at a trial, the records themselves are not admissible unless they fall within an exception to the hearsay rule. Fortunately, many of these documents do fall within the exceptions to the hearsay rule discussed above. For example, a written statement of an observer may constitute a declaration against interest or an admission, in which case it would be admissible.

(3) There are two further exceptions to the hearsay rule that also allow written accounts of an observer to be admissible.

(a) One is an exception for *business entries.* Even though the person who actually observed the events recorded in documents of this kind is not present for cross-examination, the documents are admissible by virtue of the following statute:

> "Any writing or record . . . made as a memorandum . . . of any act, transaction, occurrence, or event, shall be admissible . . . if made in the regular course of business . . ."(28 U.S.C. 1732)

i. Not every business record qualifies for admission: only those made "in the regular course of business," i.e., only those which are usually and customarily kept.

ii. The statute is apparently limited to documents containing statements of fact as distinguished from documents containing opinions.

iii. Such a record must be authenticated, i.e., shown to be an actual record of the business. This is usually done by the testimony of the company official who has general charge of making and keeping similar records. The inspector's copy of a carrier's record with the inspector's certification of the record as a true copy attached is useful if no one disputes the contents of the record. If a dispute arises, however, the inspector's testimony or the testimony of the company official who has custody of the records may be required to authenticate the document.

(b) The other exception is *official records.* Another section of 28 U.S.C. provides that -- ". . .

books or records . . . of any department or agency of the United States shall be admissible to prove the act, transaction, or occurrence as a memorandum of which the same were made or kept." (28 U.S.C. 1733)

i. Similar qualifications need to be added here regarding records of "opinions." For example, the evaluative conclusions embodied in the inspector's report would not be admissible under this statute.

ii. Official records must also be authenticated the same as business records.

(c) Government records are authenticated by either of the following:

i. An official publication of the document.

ii. A copy of record witnessed by its legal custodian and accompanied by a certificate from an official having a seal of office to establish that the witness is the legal custodian. For example, a copy of a flight progress strip would be properly authenticated when signed by the Tower Manager, the legal custodian, and accompanied by a certificate of the Administrator that the signer is the Tower Manager and is legal custodian of the document.

D. Admission of Hearsay Evidence under Exceptions. A hearsay account may be admissible under one of the exceptions indicated above and may be properly identified and authenticated and may still be completely false. What has been established here is that in holding it admissible, there is sufficient probability of its accuracy so that the judge might receive and consider it. The judge may, after comparing it with other evidence, conclude that it is, in fact, inaccurate. The hearsay rule merely prevents the judge from wasting time considering evidence whose reliability is conjectural.

E. Cases Involving Certificate Action. Regarding cases involving certificate action, there is, as a practical matter, an additional exception to the hearsay rule. In an NTSB hearing, hearsay evidence is considered admissible with the condition that the weight to be given such evidence rests within the judgement and discretion of the hearing examiner. In practice, the hearing examiners generally give only limited weight to such evidence and in some instances have considered certain hearsay so worthless as to give it no real weight at all. As such, inspectors should not rely solely on hearsay to establish a particular fact. However, hearsay is frequently useful to substantiate other admissible evidence.

F. Hearsay Rule and the Inspector. The inspector is not expected and not really required to possess an extensive or detailed knowledge of the hearsay rule. However, the inspector needs some general understanding of it. As indicated above, there can be varying degrees of hearsay.

(1) In the case of a written statement by an observer, the attorney can solve the hearsay problem merely by calling the observer to testify as a witness at a hearing. This becomes more difficult as time goes on: It is harder to locate the observer and harder for the observer to remember the event. However, in the case of a written statement by a non-observer, calling the non-observer as a witness would not suffice. A written statement by a non observer is actually hearsay on hearsay and is particularly objectionable.

(2) The inspector should be able to recognize this type of hearsay problem and obtain the missing evidence at the time of the initial investigation. The inspector should also put special emphasis on obtaining those types of evidence that would generally be admissible. An example of this would be admissions of the pilot.

(3) The inspector should ensure that he or she obtains a complete statement from a possible violator whenever this individual is willing to make a statement.

(4) Finally, the admissibility and value of hearsay evidence depends in large measure on the use for which it is offered at the trial. The same evidence may be admissible if offered for one purpose and not admissible for another. Since this cannot be finally determined until the trail, hearsay evidence should be included in the investigation file so it will be available for evaluation and possible use by the regional counsel. However, the inspector should be aware of its limitations and should avoid submitting an investigation where the only evidence to establish a fact is hearsay.

G. Other Evidentiary Uses of Written Statements. Quite apart from the hearsay rule, a written account of an observer may be useful and even admissible in the hearing in other ways. Any written account of an observation which is offered to prove the facts observed is hearsay. However, if a written account is offered for another reason, it may be admissible even

though it does not qualify under one of the exceptions to the hearsay rule.

(1) The written statement an inspector takes from an observer cannot be used at the trial in place of the observer since it is hearsay. However, if the observer does appear at the trial and changes the story on the witness stand, the written statement may be admitted to impeach the witness.

(a) The statement does not come in as evidence of the facts related, since it is unknown which statement is true. It can, however, come in to cast doubt on the witness' honesty. This is the basic reason why inspectors take written statements from eyewitnesses. It reduces the danger of surprises from unexpected testimony at a hearing. It is reasonably sure that a witness who has given a written statement will stay close to it in testimony. If the witness does not, the witness can be discredited.

(b) For impeachment purposes the statement need not necessarily have been signed. However, the inspector should attempt to get it signed since that greatly simplifies proving its authenticity. If the witness refuses to sign it, the inspector should ask the witness if it is a true statement and record the affirmative answer on the statement. The inspector should then sign the statement and date it, e.g., "The account recorded above was reported to me by [name of witness], who read it and stated that it was a true account but who declined to sign it. [Inspector's name, signature, and district office and the date]"

(2) Another use of a written account, other than to prove the truth of the facts stated, is in refreshing the recollection of a witness. The statement from an observer may be useful to the observer on the witness stand to refresh memory of the event.

(a) In some cases it may be admitted in place of the testimony if the witness is totally unable to recall the matter. The witness is, of course, still available for cross-examination.

(b) This device is also available to inspectors when they are witnesses. A careful collection of the inspector's own memoranda, notes, and reports may be extremely useful in refreshing recollection of past events, either in preparation for trial or on the witness stand.

H. Use of Physical Evidence. When introducing physical evidence (such as a piece of an aircraft), the cross-examination problem is not a factor. Rather, the two principal problems are showing that the item is **authentic** (i.e., what it is purported to be) and showing that its **condition has not changed** since the date of the incident.

(1) The problem of authenticity is solved by properly identifying the item. The inspector should note any existing features or characteristics which would help in identification. For example, if a wrench has a gouge two inches from its tip or if there is a particular color to the item, the inspector should note these special characteristics in detail so that the items can be identified later. In addition the item may be marked in such a way so as not to deface or alter the item, i.e., tagging it.

(2) Establishing that an item is unchanged can be accomplished by taking steps to ensure that it remains in its original condition until the time of trail. Locking up the item and maintaining continuous, exclusive possession of it is one method. Another is to establish a chain of custody in order to be able to account for the item's whereabouts at all times. Used separately or jointly these two methods should permit the attorney to establish that the item is authentic and unchanged.

(3) Photographs are freely admissible where relevant. They may be used to illustrate the testimony of a witness or as evidence themselves. Photographs are particularly effective in certain instances, i.e., to show that a particular area is a congested residential area or to show the unsatisfactory condition of a large item such as an aircraft wing.

(a) Before a photograph is admissible, it must be shown that the picture is a fair representation of what it purports to depict. This is done by the testimony of someone who has seen the object which was photographed and who can thus compare the photograph with it.

(b) To guard against an argument as to the authenticity of the photograph, the inspector should always note on the back of the photograph the photographer's name and the time and place the picture was taken. The inspector should also retain the negative, if possible.

(c) Photographs should be taken as soon after the occurrence as is possible. A photograph of an area or item loses some of its impact if taken five or six months later. Seasonal changes or construction can make an area look different.

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SECTION 4. PREPARATION OF FAA FORM 2150-5, ENFORCEMENT INVESTIGATIVE REPORT

1. GENERAL. Section 1 included a discussion of the Summary of Facts and Items of Proof portions of FAA Form 2150-5 and special considerations related to them. In keeping with the procedural format of Order 8700.1, the inspector should consider the following information as Background to the Procedures found in Order 2150.3, chapter 9, for filling out FAA Form 2150-5. The information contained in this section sets forth policies and guidelines which have been developed through experience over the years to improve the timeliness and quality of EIR's.

2. DETERMINING THE REGULATION BELIEVED VIOLATED.

A. Knowledge and Ability Required. To be certain the correct regulation is cited and to assist in writing a concise and accurate Summary of Facts, the investigating/reporting inspector must be knowledgeable of pertinent sections of Title 19 of the United States Code (49 U.S.C.) and 14 CFR and must know how to read and analyze those regulations properly.

B. Analysis. The first step in analyzing what regulations may have been violated is to determine which sections of 49 U.S.C. and which parts of 14 CFR apply. Generally speaking, the regulations violated are either applicable to airmen, aircraft, and/or operations.

(1) The inspector can find the pertinent sections in 49 U.S.C. applicable to compliance in Titles V and VI. Although there are other sections which lend themselves to being cited as violations of 49 U.S.C., section 610 is the one most generally cited because it covers most situations. If the violation is not covered in section 610, the inspector should refer to 49 U.S.C., Table of Contents and look for an appropriate section.

(2) The inspector should refer to a listing of 49 U.S.C. to determine which sub chapters and parts of the 14 CFR apply.

(3) The inspector needs to determine first the general applicability of the subpart of 14 CFR. To cite a particular section of a 14 CFR without checking the applicability of the subpart under which it is located is likely to result in wasted time and effort.

(a) For example, 14 CFR § 91.401(b) {**91.161**} states that certain other sections of this subpart do not apply to an aircraft maintained in accordance with a continuous airworthiness maintenance program approved under 14 CFR part 121 or 127 or 14 CFR § 135.411. Many inspectors have attempted to cite 14 CFR § 91.405 {**91.165**}, located just across the page from 14 CFR § 91.401 {**91.161**}, on 14 CFR part 121 or 135 operators when 14 CFR § 91.405 {**91.165**} is not applicable to them.

(b) Some sections of 14 CFR may appear to be applicable in the subpart applicability statement when, in fact, there may be other parts which apply more directly and should be cited. The particular regulation for the particular type of operation should be cited. For example, 14 CFR §§ 91.7 {**91.29**}, 121.153(a)(2), and 135.25(a)(2) all pertain to operation of aircraft in an unairworthy condition. 14 CFR § 91.7 {**91.29**} should be cited on a general aviation operation, 14 CFR § 121.153 on an air carrier, and 14 CFR § 135.25 on an air taxi operation. 14 CFR § 91.7 {**91.29**} could be cited on a 14 CFR part 121 or 135 operation, but there is no reason to do so since sections with those parts address the situation.

C. Determining Enforceability. Inspectors must carefully analyze sections and subsections of 14 CFR to determine their enforceability. About half of all 14 CFR is not enforceable because they either confer authority or responsibility or are definitive or explanatory in nature. To be enforceable the rule must contain mandatory or prohibitory language. (When used alone "may" is *permissive* and is used to state authority or permission.)

(1) The words "shall" and "must" appear in *mandatory* language.

(2) "No person may" and "a person may not" are examples of *prohibitory* language.

(3) There are six general types of regulations. Prohibitive and mandatory, as mentioned above, are easily discernible. However, the others require a little more in depth analysis. Look out for the following types and their associated phrases.

(a) Regulations may contain *conditionally prohibitive* language, such as "no person may except" or "no person may unless."

(b) Regulations may contain *conditionally mandatory* phraseology, such as "each person shall except" or "however."

(c) Regulations that confer *authority or responsibility,* such as "the aircraft owner is responsible," cannot be violated no matter how much the inspector might think it is.

(d) Regulations that *define or explain,* such as "this part prescribes" or "each of the follow requires," appear to be compulsory but are not mandatory or prohibitive.

D. Reading and Analyzing the Regulation. Inspectors must be able to take a regulation apart and analyze it in relation to the alleged violation to determine for certain that it has been violated. The inspector needs to answer some important questions before citing a particular section or subsection.

(1) To *whom* does the regulation apply?

(2) What does it say in its entirety? (In other words, inspectors must not read sentences or phrases out of context.)

(3) Where must it be complied with?

(4) When must it be accomplished?

(5) How does it apply in this occurrence?

(6) Are there any special conditions?

(7) Are there *exceptions or exclusions*?

(8) Does this regulation *clearly apply*?

(9) Are there any *other regulations* needed for support?

E. Elements of Regulations Which Must be Proven.

(1) All regulations have specific elements or component words that convey important information. These elements must be proven in order to show noncompliance.

(2) Inspectors must identify the elements and answer the **what, where, when, why, how, and who** questions before saying with certainty that there is a violation. Using 14 CFR § 91.13 **{91.9}** for an example, this is how the rule is broken down into its elements. Title 14 CFR § 91.13 **{91.9}** states that "No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another."

(a) Person - Who was pilot-in-command or the person responsible?

(b) Operate - What, where, when, and how did the person operate.

(c) Aircraft - What make, model, and N-number was the aircraft?

(d) Careless or reckless manner - Which was it? *What* was it? *How* was it careless or reckless?

(e) Endanger - What was the endangerment? *How* did it endanger? *Why* is it considered endangerment? *Who* was endangered? Was it actual, potential, or inherent?

(f) Life or property - Whose and *What?*

(g) Another - Who besides the pilot?

F. Enforcement of Other Referenced Documents. Occasionally, because of the scope and detail involved, other documents besides regulations are incorporated by reference. The legal effect is to require compliance with those documents; however, the 14 CFR have been violated--not the reference. For example:

(1) Title 14 CFR § 43.15(c) requires the use of a checklist while performing inspections. It states that the checklist must include the scope and detail of the items contained in 14 CFR part 43, appendix D, and 14 CFR § 43.15(b). Although appendix D must be complied with, 14 CFR § 43.15(c) is the regulation cited if it has not been complied with. If the aircraft being inspected is a rotor craft, the checklist must also contain the items in 14 CFR § 43.15(b), which is a supporting regulation and not the one violated.

(2) Other regulations require the use of manuals, advisory circulars, service bulletins, specifications, airworthiness directives, etc. Although a person may be required to use these documents, it is the regulation which requires their use that must be cited for a violation and not the referenced documents.

(3) The referenced documents in this type of situation become primary Items of Proof that must be referenced in the Summary of Facts and elaborated on in the Facts and Analysis.

G. Title 49 U.S.C., Section 609. Title 49 U.S.C., section 609 is actually impossible to violate, but on the basis of section 609, the FAA can reinspect or reexamine and, when necessary, amend, suspend, or revoke a certificate. If, upon request for a reinspection or reexamination, a person refuses to allow it or if the person fails the retest, an EIR must be prepared. sections B, C, and D need not be completed, but the need or justification for the reexamination must be

documented. This may be an accident report, incident report, complaints from industry, and/or a statement by the inspector of the inspector's own personal knowledge of the person's suspected or known incompetency. The inspector must also document the reluctance or refusal to submit, as well as the request for reexamination sent to the individual.

H. Intent of the Regulation. The preamble of the regulation may be of some help in determining the intent of the rule, but enforcement action can only be taken on what the rule actually says. It may be helpful to include a copy of the pertinent preamble in the Items of Proof and discuss the intent of the rule in the Facts and Analysis in Section D.

I. Intent of the Alleged Violator. It is very difficult, if not impossible, to prove intent. The inspector cannot normally file a violation on intent, only on the actual occurrence of a violation. The only exception to this is when the word "intent" is contained in the wording of an enforceable rule. The inspector may, however, base a recommendation for specific action and sanction on intent and may ask Regional Counsel to prepare injunctions on evidence of intent to prevent violations.

J. Preponderance of Evidence. The FAA must have more evidence that a violation did occur than it has that it did not occur before processing a case. One witness statement, even of an inspector or policeman, does not outweigh an alleged violator's statement that he or she was not in violation. Unless the inspector has other proving or circumstantial evidence to back up the word of the inspector, the inspector may as well close it out with "no action" because of insufficient evidence.

3. SECTION A.

A. Use of Section A. Section A is the only part of the EIR that must be used with every report, regardless of the type of action or sanction. This includes closing the case with no action at all. The Enforcement Information Subsystem (EIS) computer format should be used in lieu of FAA Form 2150-5, but since the computer format contains the same information as the form, the following information still applies.

B. Contents of Section A.

(1) The inspector enters a Related Report Number only when there is another violation by another person and that violation was part of the same occurrence. For example, a violation of 14 CFR § 135.265(a), "Flight time limitations and rest requirements: Scheduled operations," applies to both the certificate holder and the flight crewmembers. Therefore, both would be in violation of the same rule at the same time.

(a) When one incident involves more than one person or involves a carrier and an employee, the inspector prepares a master file and one or more companion files. Items of Proof common to all related files need to be included only in the original copy of the master file. The Items of Proof index for the companion files needs to list only the items unique to that file, i.e., enforcement history, airman history, and should include a statement that the other documents are in the original copy of the master file.

(b) All related violations shall be forwarded to the region at the same time under the same cover so that they can be reviewed and evaluated simultaneously. Operations files shall be addressed to the operations branch in the regional flight standards division.

(2) Order 2150.3 contains a sample copy of FAA Form 2150-5, section A. The following are supplemental instructions to the instructions found in Order 2150.3, chapter 9.

(a) Name. Inspectors should always use the full personal or corporate name of the alleged violator. Persons must be indicated by their last names first followed by the first and middle names. Nicknames, diminutives, or initials are inappropriate. If the alleged violator is a certificate holder, the name given should be the name that appears on the certificate. The name of a legal entity should be given in full, including any d/b/a's. When applicable, the inspector should include the operator's four-letter designator.

(b) Address and telephone number. Inspectors should use the current address with zip code and telephone number with area code of the violator. If the inspector knows that a person cannot be reached at a permanent address and telephone number, the inspector should include a current temporary address and telephone number where the person can be reached. The inspector should then explain this in section D.

(c) Date of Birth. Since FAA Form 2150-5 is designed to be used for computer input in EIS, the inspector must give the date of birth by year, month, and day: 65-07-31. If the date of birth is not applicable, the inspector should leave this area blank.

(d) Sex. The inspector must enter the letter M or F, as appropriate. Inspectors cannot use check marks since an M or an F must be entered into the computer.

(e) FAA Certificate Number. When appropriate, the inspector shall enter the number of the certificate that was actually involved in the violation or any other certificate number the alleged violator holds. If the violator is not a certificate holder, the inspector leaves this box blank.

(f) FAA Certificate Type. The inspector enters the type of certificate associated with the certificate number entered in the previous box. If there is no certificate, this is left blank. Inspectors do not enter medical certificate numbers in this box.

(g) Aviation Employer. If the alleged violation is related to employment, the inspector enters the employer's name. However, the employment must involve a segment of aviation or aviation-related activity for the employer to be considered an aviation employer. In cases involving passenger violations, the inspector enters the name of the associated carrier.

(h) Make. The inspector enters the name or trade name of the manufacturer when an aircraft, component, or appliance is involved in or related to the alleged violation. Almost all operations violations involve an aircraft, but if an aircraft, component, or appliance is not involved, inspectors leave boxes 8 through 12 blank. If more than one aircraft, component, or appliance is involved, inspectors must attach additional copies of items 8 through 12 for each.

(i) Model. The inspector enters the model of aircraft as shown on the EIS computer printout or SDR Master Report Reference Microfiche.

(j) Identification Number. For an aircraft the inspector enters the registration number (N-number). For a component or appliance, the inspector enters its serial number Owner. The inspector enters the name of the current registered owner of an aircraft or the owner of the component part.

(k) Address. The inspector enters the current mailing address of the owner.

(l) Date Occurred. The inspector enters the date on which the alleged violation occurred, again by year, month, and day. The inspector should enter nonconsecutive, multiple dates in the same manner as single dates. The inspector enters consecutive, multiple dates in this manner: 87-05-18 through 87-06-21. Even though this conflicts with Order 2130.5, this is the correct way the dates must be entered in EIS.

i. If the violation occurred on a number of different dates over a period of time, the inspector should enter the date of the first occurrence, then include all the succeeding dates in sections B and D of the report.

ii. Sometimes investigation of an accident or incident reveals that a violation occurred before the date of the accident or incident. The inspector must enter the date of the violation, not the date it became known to the FAA. For example, if a person makes an improper record entry or fails to make a required entry, the date that the entry was supposed to have been made is the date of the violation, not the date when the inspector found the violation.

iii. After completion of the report, the inspector should check to be sure all dates and times correlate through the report.

(m) Time. The inspector should enter the local time, in 24-hour time reference, at which the alleged violation took place. If the specific time of day is not relative, the inspector should leave this blank.

(n) Date Known to FAA. The inspector should enter the date the violation was first known to an FAA investigating district office.

(o) Region of Discovery. The inspector enters the two-letter identifier of the Region where the district office discovered the violation. This may not be the region of occurrence since the violation may have occurred in one region but was discovered in a different region.

(p) Location. The inspector enters the name of the geographic location where the violation occurred. The inspector may use the name of an airport, a town, or a city, or the inspector may describe the location relative to a specific airport, town, or city. When the violation occurred on an airport, the inspector must also include the airport identifier.

(q) Regulation Believed Violated. To be sure that the regulations believed violated are cited correctly, the inspector needs to analyze all pertinent 14 CFR parts, subparts, sections, and subsections. Section 2, paragraph 2 contains a detailed discussion of how to read and analyze 14 CFR to determine what regulations have been violated. Some of the main

points to consider in citing regulations believed violated are as follows:

i. The inspector must be specific and identify the 14 CFR by section and subsection, e.g., 14 CFR § 91.409(a)(1) **{91.169}**.

ii. The inspector must cite all the 14 CFR included in the Summary of Facts.

iii. The inspector can cite only regulations containing mandatory or prohibitory language.

iv. The inspector must cite pertinent portions of 49 U.S.C. when appropriate. Some sections of the Act are more pertinent and understandable than the corresponding 14 CFR. For example, section 610(a)(2) of 49 U.S.C. lends itself much more readily to a good Summary of Facts statement on persons who violate 14 CFR § 43.3(a).

v. The inspector must be certain to cite only those sections of 14 CFR that are applicable to the particular operation or occurrence. For example, there are different rules applicable to the operation of an unairworthy aircraft depending on the type of operation, e.g., 14 CFR § 91.7 **{91.29}**, 121.153, or 135.25.

vi. The inspector may include a clear, concise statement of no more than 150 characters after a single citation if the inspector believes clarification is necessary.

(r) Blocks 19 - 22. For each block the inspector enters the appropriate two-digit code from Order 2150.3, appendix B. If a suitable code is not listed in that appendix, the inspector should enter 99.

(s) Accident Associated. If an accident was not associated with the violation, the inspector enters code 00. If an accident was associated, the code is 01. If the alleged violation caused the accident, the code is 02. The NTSB definition of accident shall be used in determining if an occurrence is an accident.

(t) Security Program. Operations inspectors leave this blank since it is for security violations only.

(u) Type Action. This is where the inspector enters the recommended action to be taken. The actions are listed in Order 2150.3, paragraph 903b(25).

i. In airman medical cases, the inspector does not have to fill out items 25 through 28.

ii. If the inspector recommends Administrative Action, the inspector must make sure that no significant unsafe condition existed, there was no lack of competency or qualification involved, the violation was not deliberate, and the alleged violator has a constructive attitude toward compliance and has not been involved in previous similar violations.

iii. The inspector must remember that there is a statute of limitations for certificate suspensions. If it has been more than six months since the date of occurrence or if it is likely to be that long when regional counsel issues a certificate action, the inspector should recommend either a revocation or a civil penalty, as appropriate. The statute of limitations for civil penalties is five years from the date of occurrence. The inspector should discuss any exceptions to the six-month rule with the region before forwarding the file.

iv. Cases closed with "no action" must be based on a finding of NO violation or for insufficient evidence only.

(v) Recommended Sanction. The inspector enters whatever sanction is appropriate for the type of action taken, i.e.,

i. A warning letter or letter of correction for administrative actions.

ii. The dollar amount for recommended civil penalties.

iii. The recommended duration of a suspension

iv. This section may be left blank for any other type of sanction.

(w) The *reporting inspector's name* should be typed in the space provided on the form, but the inspector's signature is not required.

(x) The inspector enters the appropriate *region and field office identifier* (four digits) and the office manager's name.

(y) The *district office manager* must indicate the date he or she signed the report.

4. SECTION B - SUMMARY OF FACTS. The Summary of Facts is the nucleus of the entire investigation and report. The whole case centers around this portion of the report. Ironically, the Summary of Facts is also the crux of the EIR problem.

A. Importance of a Good Summary of Facts. A good Summary of Facts is of utmost importance to investigation and report of good quality. In the

Summary of Facts, the FAA charges the person with a violation, using the precise facts we must prove or disprove to determine whether we have a violation or not. A report can be processed with a poor Summary of Facts, provided the evidence is "good," but seldom is the evidence good when based on a poor Summary of Facts. When there is a good Summary of Facts, the evidence is usually adequate, the Facts and Analysis section is complete, and the case can be readily processed.

B. Problems with the Summary of Facts.

(1) Summaries of Fact have been too lengthy. Some inspectors have the idea that every fact that is gathered in the investigation must be reported under this item. In most cases, the entire Summary of Facts can be written in one sentence or in no more than one short paragraph.

(2) Summaries of Facts have been too short. Apparently, some inspectors at times get fixed on only one or two elements of the rule and simply ignore the rest.

(3) Some inspectors try to mix two or more sections or subsections of 14 CFR into a single statement, resulting in a Summary of Facts that fails to cover all elements of any of them.

C. Suggestions for Improvement.

(1) *Keep it brief.* The Summary of Facts should be complete but brief. The inspector should simply state what the person did or did not do that was in violation of the regulations. The inspector should save the details, even though they may be facts, for the Facts and Analysis in section D.

(a) Some reports lead off with, "This report indicates a violation of the following Title 14 of the Code of Federal Regulations." This is redundant since there is a space provided to indicate the violated regulations. This type of lead statement infers and often continues in the vein of "what was violated" instead of "what a person did or did not do that was contrary to the regulation."

(b) The Summary of Facts is supposed to be a statement of the facts, not an apologetic, hedging opinion. Common lead-off statements that contribute to this are:

- "It is alleged that . . ."
- "It has been reported to this office . . ."
- "A Hewlett-Packard generator had exceeded . . ."
- "Aircraft records show . . ."
- "Aircraft owner complained of poor . . ."

(c) If the inspector has not proved beyond doubt, at least to him or herself, that this person is definitely in violation of 14 CFR before writing the statement, it is extremely doubtful that the inspector can prove it to anyone else. The inspector must be positive and specific in the factual statement. Better still, the inspector should get right to the point, i.e. --

- "Mr. Jones operated . . . "
- "Mr. Davis approved for return to service. . . "
- "Mr. Smith performed . . . "
- "Mr. Smith violated 14 CFR § 91.13 when he operated Cessna 152, N55468, . . ."

(2) During the course of an investigation, if an inspector keeps in mind an anticipation of what the Summary of Facts will have to say, the investigative directions will likely take new dimensions and directions in efforts that produce better related findings. Also, "blind alleys" and other nonproductive efforts can be avoided, giving better time/result factors. Finally, this same process will develop an inspector's insight relating to "when to close" by making clear the point of diminishing or negative returns of investigative reports.

(3) A close review of 14 CFR section believed violated *AT THE TIME* the inspector composes the Summary of Facts is a good key both to revealing the nature of the act and thereby the evidence necessary to support it. If the inspector is watchful in this respect, the inspector may find that the infraction is more intense than realized or that there was no violation at all of the particular section involved.

(4) A wise inspector will continually monitor notices and orders issued by regional counsel and based on FSDO reports. This is personalized training in that it is related to a report familiar to each inspector who prepared or worked on it. These legal documents are usually in two sections: the "factual allegation" and the "violation alleged." Where legal writes "you," read the person's name instead. From what follows, the inspector may learn a great deal about writing Summa-

ries of Fact. They often reveal a simple way to make a difficult statement.

(a) Regional counsel civil penalty letters and orders of suspension or revocation to the violator contain statements of violation similar to the following:

- "You violated 14 CFR § 43.13(a) in that you, in the performance of maintenance, failed to use methods, techniques, and practices acceptable to the Administrator."
- "You violated 14 CFR § 43.15(a) in that you performed inspections on aircraft without determining whether the aircraft met all applicable airworthiness requirements."

(b) Using the above two examples, for the EIR the inspector simply replaces "you" with the person's name, the date, the aircraft identification, and, where appropriate, the specific act and the place of occurrence. That constitutes a complete factual statement.

(5) If the inspector has written a statement paraphrasing the regulations to determine regulations believed violated, the inspector needs only to paraphrase the remainder of the section, telling what the person did or did not do to be in violation in the words of the rule.

(6) Following are some good examples of Summaries of Facts which demonstrate how to paraphrase the regulation by stating what the person did or did not do to be in violation based on the wording of the rule:

(a) "Mr. Joe Smith violated 14 CFR § 43.14(b) in that he performed maintenance on Piper PA-23, N2468P, on May 30, 1990, in such a manner that the aircraft was not approved for return to service in a condition at least equal to its original or properly altered condition. (Exhibits 1 and 2)"

(b) "Mr. Joe Smith performed maintenance on Piper PA-23, N2468P, on May 30, 1990 at Santa Monica, CA and failed to use methods, techniques, and practices acceptable to the Administrator, in violation of 14 CFR § 43.13(a). (Exhibit 3)"

(c) The occurrence can be described in more detail and still be brief: "Mr. Jim Jones violated 14 CFR § 43.15(a) of the 14 CFR on May 15, 1990 when he performed an annual inspection on Cessna 310, N900C, and approved it for return to service without determining whether the aircraft met all applicable airworthiness requirements. Airworthiness Directive 69-14-1 was not complied with. Exhibits 4 and 5)"

(7) An acceptable, alternate method of constructing a good Summary of Facts is to begin with a lead-in paragraph that briefly describes the occurrence. This method works very well when there are a number of violations of different 14 CFR sections and subsections. However, the use of this method could lead to a lengthy Summary of Facts, such as has been condemned above, if the inspector is not careful. If the inspector stays with a short lead-in paragraph stating the essential facts, this method is as good as the other.

(a) The lead paragraph should name the person; identify the aircraft, date, time, and location; and tell in a few words what actually occurred--in plain English.

(b) The inspector should then write a brief, factual statement on each 14 CFR violated by section and subsection, telling what the person did or did not do to be in violation and paraphrasing the words of the rule.

(c) The following is an example of this acceptable, alternate method of writing a Summary of Facts:

> "On February 4, 1991, at about 3:50 p.m., Mr. Mike Jones, flying Piper N34567, the property of another, with two passengers on board, flew less than 500 feet over persons and property in a housing area in mountainous terrain near Jamul, California (Exhibits 1-5, 8, 10, 11, 13). During this flight, he violated:
>
> "(1) 14 CFR § 91.13 when he operated an aircraft in a careless manner, endangering the aircraft, the lives of his passengers, and persons and property on the ground by flying at altitudes of 70 to 300 feet above the surface. (Exhibits 1-4, 8, 10)
>
> "(2) 14 CFR § 91.119(c) when he operated an aircraft closer than 500 feet to persons and structures on the surface in other than a congested area. (Exhibits 1-5, 11)"

(8) In summary the inspector must keep in mind the following points when constructing the Summary of Facts:

(a) Make a concise statement of established facts that are essential to proving the violation of each regulation believed violated.

i. Be specific, simple, and positive.

ii. Use only one statement for each specific subsection of regulation violated.

iii. Follow each statement with the exhibit number that is the prime proof of violation of that section.

(b) The wording of the Summary should tie directly to the wording of the regulation.

i. Show 14 CFR violated by the action of the fact, i.e., what was done or not done that resulted in a violation.

ii. This can best be done by editing and paraphrasing the particular section or subsection of the 14 CFR, replacing words like "no person" or "a person" with the name of the person in violation.

(c) Briefly identify who did what, when they did it, where they did it, why it was in violation, and how it occurred--as appropriate to the elements of the regulation.

i. State only what is proven in the file.

ii. Be prepared to prove all of it.

iii. Be sure that the regulation related to the Summary of Facts is not a definitive or explanatory regulation, such as applicability. Look for "no person may. . ." and if that is not found somewhere in the section involved or somewhere that compels compliances with the section, the inspector might not have a violation of the section proven--no matter how much evidence is enclosed.

(d) When there is insufficient evidence to prove the case, so state that, and close the report out without action.

5. SECTION C - ITEMS OF PROOF. When investigating a case, the inspector should gather anything which may be pertinent to that case. Concern about "rules of evidence" is not important at this stage.

A. Format. To assist in writing the Facts and Analysis and to help the reviewers, the inspector should list the Items of Proofs (exhibits) in chronological order by date, according to the sequence of the investigative events.

(1) The inspector should start the list with the telephone record, incident report, complaint, or whatever brought the occurrence to the attention of the FSDO.

(2) To keep it simple, the inspector should just add each primary exhibit to the listing as the investigation progresses.

(3) Technical supporting exhibits should then be grouped with the primary exhibits to which they relate. The dates on technical supporting exhibits mean nothing as far as chronological listing goes, but they may be important to show currency at the time of the violation.

B. The Law of Evidence. Simply put, the Law of Evidence establishes whether evidence is admissible or acceptable or not. Evidence is only admissible if it is relevant, material, or competent. (See section 3 for a full discussion of evidence, including hearsay.)

C. Proving and Circumstantial Evidence. Only salient (proving) evidence listed in section C should be referenced in section B.

(1) The inspector submits all evidence to support the contention that an infraction did, in fact, occur. The inspector also submits evidence concerning the background and circumstances (both mitigating and aggravating) surrounding the event.

(2) By referencing only salient evidence relied on to establish an act contrary to a regulation, the inspector can save many hours in the review process and in conferences with regional counsel.

(3) It stands to reason that if the evidence on which the inspector relies as proof is insufficient, all the other evidence used to establish environment and circumstances would be to no avail. The exception to this is when the inspector must rely on a preponderance of circumstantial evidence.

D. Sufficient versus Insufficient Evidence. When evidence is insufficient for a legal enforcement action, it is insufficient for any enforcement action. Either the person did it or did not do it. Therefore, either we can prove or we cannot prove it. This is the end of "on and off" options, i.e., we cannot say, "either we report it or we do not." If we have a proven infraction, it must be reported. It is a matter of degree and method (legal versus administrative). It seems to be well understood

what administrative violations are; however, we want to emphasize what they are not. They are not a procedure for reporting an infraction based on inconclusive evidence. If there is insufficient evidence, the case must be closed out with no action.

E. Contents of Exhibits.

(1) When listing exhibits, the inspector should give a brief description of each exhibit. This will assist the reporting inspector, as well as other reviewers of the file, when searching for pertinent information. These descriptions have special value in complex cases or where the inspector wants to emphasize an exhibit or a point within an exhibit that is considered significant or controversial.

(2) If witness statements do not include addresses and telephone numbers, these should be listed with the pertinent Item of Proof (exhibit). For example:

> "1. FAA Form 1360-33, Record of Telephone Conversation, with Harold Gibbits, dated 6/1/90, 224 Rae Avenue, Center, CA 92222, (213) 555-8948.
>
> "2. Statement of Mr. J. Jones, dated 6/5/90 - eyewitness account of incident; telephone (213) 555-8946.
>
> "3. Aircraft Log, page 17 - last recorded annual inspection, dated 2/7/89.
>
> "4. Cessna 610 Airplane Flight Manual, page 27, fuel system."

F. Notice of Investigation and Response. In all cases the inspector must include the notification of investigation or state in the Analysis of Section D that an oral notice was given. Also, the inspector must always include the violator's response. In short, the inspector should always give the violator an opportunity to explain, excuse, or deny and then document both the opportunity and refusal, if any.

G. No Action - Insufficient Evidence. Many violations have occurred and the FAA is aware that they have occurred, but we cannot establish proof because of insufficient evidence.

(1) Inspectors can take a positive approach to this problem by accentuating efforts toward productive, provable cases and by increasing surveillance in suspect areas to obtain **first** compliance or later, if required, evidence to prove that a violation occurred.

(2) Inspectors shall remember, however, that they should not conduct "stake-outs" and actually allow someone to violate a regulation when it could be prevented. The only exception to this may be when someone deliberately continues to operate in violation of 14 CFR.

H. Effectiveness of Documentary Evidence.

(1) When an infraction involves an uninspected aircraft or an airman lacking logbook endorsement, the inspector can use the following types of documentary evidence. They are listed in descending order of effectiveness:

(a) The logbook itself, which, however, cannot normally be taken.

(b) Certified photocopy of pertinent pages covering the time in question; dates are important.

(c) Statement of an FAA inspector who examined the logbook.

(d) Admission of the violator.

(e) A computer printout from the aircraft registry or an EIS printout.

(2) The inspector should remember that although logbooks can later be subpoenaed, they can also be altered, corrected, or "conveniently lost" after the inspector returns them. The inspector needs to make copies of pertinent pages as soon as possible.

(3) The inspector should watch out for "traps." The aircraft could have been inspected, but that fact was not recorded. The pilot could have had the proficiency check, but the check airman did not record it. We can only file violations on what we can **prove has occurred, not on what appears to have occurred.**

(4) The inspector should always document the violation history of the alleged violator and include the EIS computer printouts on the aircraft and airman. The official violation history may be obtained only the AIDS/EIS Display and Profile.

(5) All copies of Items of Proof, except for physical evidence, must accompany the report.

(a) Each Item of Proof shall be numbered and tabbed consecutively as an exhibit.

(b) Each exhibit, including a brief statement of its content, shall be listed in an index to this section

of the report. The inspector should keep the index in a logical sequence to aid in reviewing the report.

(c) The inspector must not mark on or deface original exhibits. If marks must be made, the inspector can use plastic overlays or mark on a copy.

(6) All copies of Items of Proof must be legible, and official documents must be certified. Copies of published documents need not be certified.

(a) Whenever making copies of documents during an accident or incident investigation, the inspector should prepare enough copies to have some available for any possible EIR.

(b) Copies made from earlier copies of documents often are not legible.

(c) Inspectors must not sign certified copy statements unless the inspector personally made the copy. If a clerical or secretarial person made the copies, that person must sign it.

(7) When preparing investigative reports, the inspector should remember that the reviewers will not have had the advantage of the inspector's knowledge of the case facts. Therefore, whenever photographs, sketches, drawings, copies of pages from books, etc., will materially contribute to a clearer technical explanation of legal evidence, the inspector should include them with the report. The inspector must be sure to number the pages of multiple-page exhibits, page 1 of 3, page 2 of 3, etc.

I. Witness Statements. Using the techniques on active listening in section 1, the inspector should interview and obtain written statements from all knowledgeable witnesses or at least from a representative number if a crowd witnessed the violation.

(1) The inspector should select the best witnesses based on their knowledge and competence to testify.

(2) If an inspector witnesses a violation or becomes knowledgeable of anything pertinent which is not contained in other witness statements, the inspector should prepare and sign a personal statement.

(3) The inspector should always remember to interview and obtain statements from the following persons when they are pertinent to the investigation:

(a) The pilot-in-command.

(b) The other pilot and passengers.

(c) **All** involved air traffic controllers.

(d) Airport personnel who may have serviced an aircraft or witnessed its arrival or departure.

(e) Bartenders or food servers who may have served the person before or after a flight. This is very important in "alcohol" violations.

(f) State and local police usually submit good witness statements, but the inspector often has to "go after them."

(g) Other persons who work or reside in the area where the violation occurred. Everyone does not complain. Sometimes a knock on a few doors can be rewarding in obtaining witness statements.

(4) When a person refuses to or cannot write a statement, the inspector may assist in preparing the statement but must not dictate it.

(5) Statements should be complete, concise, and to the point. They should convey what that person said, did, or perceived by their senses. The inspector should include the witness' complete name, address, telephone number, occupation, and aeronautical experience, if any. Any opinions the witness stated should be shown as such.

(6) If a witness refuses to sign a statement after it is written, the inspector should ask the witness if the witness agrees to the substance of the statement. If the witness agrees but still refuses to sign, the inspector should make a notation to that effect, date and sign the statement, and ask other witnesses present to sign it also.

J. Other Forms of Documentary Evidence.

(1) When *photographs* are used as essential evidence, it is extremely important to have names and addresses of photographers; the date and time the pictures were taken; the type of camera, focal length of the camera lens at infinity, etc.; the type of film used; and who has custody of the negatives.

(2) Charts, maps, and diagrams can be very helpful to show airports, terrain, congestion, obstructions, etc. They may also be useful in interviewing witnesses and evaluating their statements, establishing the degree of hazard involved, etc. The inspector must be sure to explain the intended purpose of charts, maps, and diagrams in section D of the report. The

inspector must always include a copy of the TCA chart which was current at the time of a TCA violation.

(3) It is beneficial for FSDO's to establish a written agreement with ATC facilities regarding notification procedures and procuring of *ATC records and tapes* as evidence.

(a) Inspectors request ATC to withhold tapes from service and to provide any appropriate records and tapes when there is an indication of a violation. The inspector shall also notify ATC within five days whether to send the records and tapes to the FSDO as soon as possible or to put the tapes back in service.

(b) When requesting tapes, inspectors should ask for only the portion pertinent to the violation. They should cut and preserve that portion of the original tape for transcript if needed. A transcript is not needed unless regional counsel request it.

(4) If weather is involved in the violation, the inspector shall obtain certified copies of *pertinent weather data* from the National Weather Service. The inspector must also include a weather analysis in Section D of the report.

(5) The FAA is authorized to obtain and use aircraft *flight recorder tapes* in any investigation, including enforcement action (14 CFR § 13.7). However, they must not be used to discover any violations when there is no other evidence. Flight recorder tapes shall not be used as evidence except to corroborate other evidence or to resolve conflicting evidence. Therefore, the inspector shall coordinate use of flight recorder tapes with the regional office. If they are used, a certified readout of the tape is required. If the NTSB has the tapes, the inspector must request them in accordance with Order 2150.3. During the readout of the tapes, an FAA representative must be present to testify for authenticity.

(6) The use of *cockpit voice recorder tapes* as evidence in enforcement is prohibited by 14 CFR §§ 121.359 and 135.151.

(7) If other Federal or local law enforcement agencies are involved, the inspector should obtain records from them. The inspector should obtain pertinent *transcripts and certified copies* of court orders, convictions, etc. The inspector should include any foreign, state, or local laws if pertinent.

(8) Medical records can be obtained with the individual's consent or by subpoena. One exception is that when alcohol or drugs are involved, pilots must now consent to provide pertinent records in accordance with 14 CFR § 91.17(c) and (d) **{91.11}**.

(a) Government medical records are subject to the Privacy and Freedom of Information Acts. Where required, the inspector should try to obtain consent from the owner.

(b) An airman medical information printout may be obtained from CAIS or an airman medical form may be obtained from AAM-300.

(c) If an airman does not have a current medical certificate or any other certificate for that matter, the inspector should request AAM-300 to send a "diligent search" certificate and include it in the Items of Proof.

(9) The inspector must take care that *physical evidence* is not lost, destroyed, damaged, or altered because the inspector may have to testify to it. The inspector should establish a chain of custody if necessary or lock the evidence up in a safe place, if possible. The inspector should be sure to at least take photographs of physical evidence and put those in the Items of Proof, along with an explanation of where the evidence is located.

K. Other Pertinent Items of Proof. Other Items of Proof that must be included when pertinent are:

(1) A copy of the *air operator or air agency certificate* held by the alleged violator.

(2) A copy of the pertinent part of the *operations specifications or waiver* when any of the provisions are believed violated.

(3) A copy of the pertinent part of the **airworthiness directive, manufacturer's service bulletin, logbook entries, or other aircraft maintenance records** when a maintenance or operational rule is involved.

(4) When the location is alleged to be a congested area and particularly when 14 CFR § 91.119(a) **{91.79}** is involved, *city maps or photographs* (35 mm aerial shots with negatives preferred).

(5) When airworthiness is believed to be involved, a separate signed *inspector's statement* (as an exhibit) which clearly states how the inspector concluded that the aircraft was in an unairworthy condition at the time of the operating violation, either by reason of not meeting type certificate design requirements or that the aircraft is otherwise unsafe for

flight. (Refer to section 5, Special Consideration, for a discussion of airworthiness.)

(6) When controlled airspace is involved, a copy of the appropriate *en route or sectional chart or approach chart,* effective at the time of the occurrence. Charts should be in their original form and not marked on.

(7) When an *accident or incident* is involved, a complete copy of the *report* when available as a numbered exhibit.

(8) When weather is involved, the following information that would have been available to the pilot shall be included:

(a) Area forecasts, with all SIGMET/ AIRMET amendments.

(b) Terminal forecasts, with all amendments, for departure point, destination, and along the route of flight, including at least two hours before the flight began and two hours after the flight ended.

(c) On the weather reports and forecasts (except officially authenticated NWS copies) which will be referred to in the Facts and Analysis or elsewhere, the inspector should place a red check mark adjacent to the portions referenced and convert the Greenwich Mean Times and dates to the appropriate local time and dates with a pencil.

L. Submission of Additional Evidence or Material. Reporting of facts does not end when the FSDO forwards the EIR to the region. The inspector should forward any subsequent data immediately to the regional office and include the inspector's evaluation and recommendations concerning the material. Additional investigation may be required to evaluate any additional evidence intelligently.

M. Summary. Inspectors should check the following items to assure that they have a good Section C before forwarding the file for review.

(1) A **numerical index** of all Items of Proof, with a brief statement of contents.

(2) The Inspector has **numbered each Item of Proof as an Exhibit.**

(3) The inspector has **listed all items in a logical order.**

(4) The inspector has included **originals of documents when possible.**

(5) **Copies have been certified** when appropriate.

(6) The inspector has included **photographs of physical evidence.**

(7) **All evidence referred to in the file should be included in an exhibit, and all exhibits should be referenced in the Facts and Analysis.**

6. SECTION D - FACTS AND ANALYSIS. In Section D of the report, the inspector is given all possible latitude to build on the nucleus of the Summary of Facts. The narrative of all supporting facts, circumstances, and all the conditions surrounding the incident and the investigation must be complete. The analysis and conclusions must reflect the inspector's judgement concerning how safety was or was not affected.

A. Inspector Recommendation. The inspector must make a recommendation regarding the enforcement action and sanction in the concluding comments of this section. However, the Facts and Analysis will necessarily be relied upon by the flight standards division and regional counsel for determining precisely what the appropriate final action and sanction should be. It is therefore essential that both the Facts and Analysis be as accurate and as complete as the inspector can make it.

B. Safety Implications. The inspector's opinion regarding safety implications is very important, but the inspector should remember that the value of an opinion is directly proportional to the care exercised in setting forth the reasons supporting it.

C. Format. The general format of the Facts and Analysis is as follows:

(1) The *facts* are set forth in a complete, detailed, factual narrative of the investigation of the violation and are separated from the evaluation and analysis.

(2) The *analysis* is the inspector's evaluation and analysis of the results of the investigation.

D. What Not to Include in the Facts. Inspectors must not repeat in section D what has already been stated in the Summary of Facts, nor can inspectors simply refer the reviewers to the exhibits to discover the facts for themselves. Title 14 CFR need not neces-

sarily be mentioned in the facts, unless they are an integral part of the documents contained in the exhibits.

E. The Facts. The factual narrative shall include all facts and surrounding factual conditions and circumstances found and documented during the investigation. All documents in section C, Items of Proof, shall be referenced in the facts, and all documents referenced in the facts shall be included in the Items of Proof as exhibits.

(1) The inspector must describe all pertinent facts and circumstances in an organized, chronological fashion.

(2) The inspector must write the complete, factual case history--the story of what the investigation has provided.

(3) When writing the facts, the inspector should start with Exhibit #1 and then glean all pertinent facts from all the exhibits. If section C has been properly organized, the factual narrative will start with a brief description of the basis for the investigation, a complaint, accident, incident, surveillance, etc.

(4) The inspector should continue in sequence with a narrative about each pertinent fact documented in the exhibits.

(a) The inspector should consider everything in the witness statements and other exhibits as facts at this time, whether or not the inspector believes it. The inspector can state what he or she believes in the Analysis.

(b) The inspector must be sure to cover related investigative actions (the leads followed and what was found during the investigation), as well as the factual conditions and circumstances surrounding the violation and investigation. If these things are not documented in witness statements, technical publications, logbooks, manuals, etc., the inspector must be sure to include a personally signed statement to document them in the exhibits.

(c) The inspector must follow each pertinent fact taken from the exhibits with a reference to that exhibit, by page and paragraph if applicable, throughout the factual narrative.

(5) The depth and detail of the factual narrative will necessarily depend on the complexity and nature of the case and the amount of available evidence.

F. The Analysis.

(1) The Analysis gives the inspector the chance to express personal feelings, beliefs, opinions, and conjecture, based on the inspector's technical knowledge, skills, and expertise. It also provides the inspector with the opportunity to evaluate and analyze the facts, as presented in the Items of Proof and factual narrative, and straighten some things out regarding their worth, relevancy, reliability, and importance.

(2) Order 2150.3 requires that the following items be addressed in the Analysis portion of section D.

(a) How safety was or was not affected.

(b) The violator's attitude.

(c) The violator's enforcement history.

(d) Economic and livelihood considerations for the violator.

(e) Reliability of the evidence.

(f) Mitigating, extenuating, or aggravating factors.

(g) Inspector's opinions, feelings, and conjectures, labelled as such.

(h) A conclusion that justifies the recommended action and sanction.

(3) The sequence in which the Analysis items are arranged provides continuity to the Analysis process.

(a) The inspector should normally first analyze the evidence for its reliability and conflicts to determine and explain "what really happened" before assessing the safety involvement and impact.

(b) The inspector then follows this with the specifics of the event.

(c) The inspector ends with the conclusion which ties all the preceding together.

(4) If the inspector wishes to write the items in a different sequence, the inspector may do so.

(5) The inspector should have questioned witnesses during the investigation to determine their

aeronautical knowledge and experience so their reliability as witnesses can be evaluated in the analysis.

(6) The inspector should review the entire factual narrative carefully to determine if there is any conflicting evidence.

(a) Those things reported as facts when the inspector knew they could not be true are surely in conflict with other evidence. This provides an inspector the opportunity to straighten that all out. Any alleged violator who has denied being in violation in response to a letter of investigation is presenting evidence which is in conflict with other evidence, and that needs to be evaluated to determine its worth, pro and con.

(b) The inspector must review the Items of Proof to determine if there is any conflict regarding make, model, or registration number of aircraft involved. Conflicts in names, dates, and times also occur quite often. The inspector needs to point these out and give an explanation of why they are in conflict. Although they may not be in conflict, Greenwich Mean Time and Daylight Saving Time can be confusing, and the inspector must explain them when they appear to conflict with other times given in the report.

(c) If there is no conflicting evidence, the inspector must state that there is none.

(7) The safety aspects of a violation are of utmost importance. The inspector must analyze how safety was or was not affected in each case.

(a) The technical factors upon which the inspector bases his or her conclusions should be included, discussed, and referenced as appropriate. In some cases it may be necessary to illustrate safety implications through inclusion of performance data on aircraft or engines taken from technical publications. In such instances the source of information must be supplied along with essential details, such as engine and propeller model number, in order that the data may be readily verified.

(b) Technical publications, manuals, etc., which are included for reference, should be carefully reviewed to ensure that they were current at the time of the violation.

(c) When requesting reexamination or reinspection, as well as recommending other action, the inspector must be sure to document the need and explain why the inspector thinks reexamination is necessary. The inspector should also document the reluctance or refusal to submit and the issuance of the reexamination letter. During any TCA violation investigation in which pilot competency becomes a question, a reexamination shall be requested regardless of the outcome of the violation investigation. It may consist of an oral examination, a flight examination, or both, as appropriate to the situation.

(d) The inspector must analyze any endangerment involved and determine whether it should be classified *actual, inherent, or potential.* Actual or inherent endangerment can be much more critical than potential endangerment; therefore, the case should be analyzed accordingly. Inherent endangerment can be characterized by someone simply being in the wrong place at a given time, such as an unauthorized intrusion in a TCA, regardless of whether there was any conflict with other aircraft.

(e) The inspector must analyze the "careless or reckless" aspects of a violation and elaborate on the willfulness, intention, and deliberateness of the violation, if applicable. The NTSB has determined that "reckless" operation results from a deliberate or willful disregard of the regulations or accepted standards of safety so as to potentially or actually endanger the life or property of another. (Refer to section 5, Special Considerations, for a detailed discussion of careless and reckless.)

(f) The inspector must consider and analyze the safety impact in regards to the certificate holder's responsibility level, private versus ATP, air carrier operation versus general aviation operation, etc.

(g) If airworthiness is involved, the inspector must analyze and evaluate each airworthiness discrepancy with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness.

(h) The inspector must also keep in mind that the NTSB decisions which have been made in regards to aircraft airworthiness: "To be airworthy an aircraft must conform to its type certificate as well as be in condition for safe operation." Conversely, where the evidence clearly demonstrates that the aircraft is not in condition for safe operation, the NTSB will undoubtedly sustain a finding that the aircraft is unairworthy. However, to show nonconformance with a type certificate, the inspector must have positive evidence concerning the contents of the type certification data and the particulars in which the aircraft in question differs from that data.

(i) If unairworthiness is a judgement, the inspector must be sure that there are expert witness statements to back up an inspector's statement. An inspector statement may not carry any more weight than the alleged violator's statement on its own.

(j) If the inspector does not believe safety was involved, then the inspector must so state.

(8) The inspector shall determine if there are any **mitigating or aggravating circumstances** involved in the violation or in the investigation and analyze and report them. Mitigating means to cause to become less harsh or hostile; aggravating means to make worse or more severe.

(a) Mitigating circumstances are sometimes included in the evidence but not analyzed by the inspector. Other times, mitigating circumstances have not been included in the EIR but kept in the FSDO file. **Nothing shall be kept in the FSDO file that is not in the official file.** If it is worth keeping, it is worth including in the report.

(b) FAA investigations are not designed to "hang it on" an individual but are a **diligent search for all related facts, conditions, and circumstances** reasonably obtained and consistent with the occurrence. In other words **we are as compelled to report mitigating circumstances as we are those that are aggravating.** A good report reflects a clinical approach devoid of personal involvement.

(c) If there are no mitigating or aggravating circumstances, then the inspector must so state.

(9) The reporting inspector has all latitude for reporting personal opinions, feelings, and conjecture as long as they are reported as such. Remember, however, that the value of an opinion is directly proportional to the care exercised in setting forth the reasons supporting it. It may be helpful for the inspector to give an opinion of what caused the violation to occur, but the inspector needs to be specific in commenting, even when the opinion cannot be completely supported by facts. The inspector's opinion is especially valued in his or her particular area of aviation technical expertise. If it has not been covered elsewhere in the report, the inspector should provide an opinion on the following:

(a) Carelessness on the part of the alleged violator or failure to exercise proper care.

(b) Alleged violator's *skill or judgement.*

(c) Adequacy of training or *lack of proficiency*

(d) Lack of *qualification and/or competency.*

(e) Lack of proper *supervision.*

(f) Poor or *inadequate record keeping* system, etc.

(10) Whenever possible, the inspector should discuss the violation in person with the alleged violator before writing the report. This allows the inspector to discern the person's attitude and to gather other personal knowledge of the person which could be helpful in analyzing the situation.

(a) The age, experience, past record, general reputation, attitude toward safety and compliance, and the economic status of the person or organization involved should be set down and taken into consideration. The inspector should also consider the person's cooperation, or the lack of it, during the investigation.

(b) The inspector must be sure to consider and analyze previous violation history and how it may or may not relate to the case. If there is no violation history, the inspector must state so, not ignore it.

(c) In every case where corrective action has been taken or is in process, the inspector should include a description of such action along with the inspector's opinion as to its effectiveness.

(d) The inspector should also include special factors that bear on the type of sanction to be recommended. For example:

i. Before recommending certificate action, the inspector should consider the use that an individual makes of the certificate and how the loss of the certificate might affect livelihood.

ii. The inspector should consider the person's economic situation in order to use good judgement in recommending a civil penalty.

iii. Consideration of whether state, municipal, or company action has been taken can be very important in analyzing what FAA action should be recommended.

(11) In the Analysis the inspector must be sure to reference each supporting exhibit, just as was done in the Facts portion of section D. There may be additional exhibits the inspector wishes to include after

beginning to write the Analysis portion. If there are, the inspector must review the Facts and determine if there is need to expand on them and reference the new exhibits therein.

(12) In preparing the conclusion and recommendation, the inspector should carefully review all information that has been included in the analysis and simply state what the inspector's conclusions are based on. The inspector must keep in mind that the Analysis is the inspector's rationale for the enforcement action and sanction the inspector has recommended.

(a) In all cases the inspector must consider whether the sanction is to remedy, punish, or make an example to discourage noncompliance.

(b) An inspector should consider a **civil penalty** whenever the following elements are present:

i. The violator holds no certificate.

ii. No question of qualification is involved.

iii. The case is too serious to handle administratively.

iv. Suspension is not necessary for immediate corrective action.

v. Suspension is unfair or will create undue hardship.

vi. Suspension is not required for aviation safety.

(c) The inspector should consider the following points when determining **civil penalty sanctions**:

i. The appropriate amount should be based on the facts and circumstances of the case and current FAA policy.

ii. The normal maximum civil penalty for airmen is $1,000.00 per rule violated.

iii. The inspector may consider multiple citations for a single act or omission as one violation if a case does not involve flagrant violations or a repeat violator. In other words, violations of closely related regulations may be considered a single violation when determining civil penalty sanctions.

iv. When multiple regulations are cited as a result of separate violations, the inspector may recommend a $1,000.00 maximum civil penalty for each violation.

v. If a violation is a continuing one, each day may constitute a separate offense.

vi. If flight operations are involved, and the pilot-in-command or the operator is aware of the violation, each flight shall constitute a separate offense.

(d) The inspector should consider the following points for possible **suspension or revocation** of a certificate:

i. Suspension or revocation action may be taken for punitive purposes when that is appropriate.

ii. Suspension may still be recommended pending completion of remedial action (retraining or reexamination, etc.).

iii. Revocation of a certificate or rating is appropriate where specifically authorized by 14 CFR or when the evidence establishes lack of qualification.

(e) **Suspension** of a certificate is usually recommended when:

i. Safety requires it.

ii. Technical proficiency or qualification warrants it.

iii. The certificate holder resists reexamination or remedial training.

iv. Reexamination or remedial training is not satisfactorily accomplished.

v. Withdrawal of privileges is warranted for punitive action.

vi. If action has been taken by an employer or other agency, suspension action should still be recommended when warranted. Such action may be considered in determining the extend of suspension or the amount of civil penalty.

vii. If a certificate action is recommended to run concurrently with a company action, the inspector should include the exact dates of the company suspension.

(f) **Revocation** of a certificate is usually recommended when:

i. The lack of capability is not immediately correctable.

ii. There is repeated unwillingness or inability to comply.

iii. There is continued use of the certificate which is detrimental to the public interest.

iv. The person's conduct demonstrates lack of qualification.

(g) **Deferred suspension** may be recommended when corrective action by the violator would best serve the purposes of the compliance and enforcement program. This is an "in-between" type of action that may fit a case that is too serious or does not otherwise qualify for an administrative action. Deferred suspension involves the following actions:

i. FAA issues a Notice of Proposed Certificate Action under 49 U.S.C., section 609.

ii. The certificate is suspended for a specific period, but the holder is provided an opportunity to avoid a sanction if suggested corrective action is taken before the date specified for suspension.

iii. When evidence is submitted that corrective action has been taken, the FAA waives the imposition of any suspension.

(h) Emergency certificate actions may be taken only when clearly needed in the public interest. If emergency action is warranted, it should have been thought of well in advance of the inspector's writing the summary of conclusions and recommendations. The following urgent considerations apply to all recommended emergency actions:

i. The regional flight standards division must be notified by telephone immediately when emergency action is contemplated.

ii. With regional concurrence, action must be taken immediately when the need is recognized.

iii. Emergency action is not to be used for punitive reasons.

iv. The inspector must show evidence of lack of qualification or that the holder will likely continue not to comply.

v. An EIR must be completed and processed as soon as possible.

(i) Other actions available to the inspector, if warranted, are:

i. Seizure of aircraft if removal of the aircraft is suspected to prevent payment of a civil penalty or if further flight is contemplated in noncompliance with 14 CFR.

ii. Cease and desist orders if a violator continues to violate the regulations after other actions have been taken.

iii. Order of compliance and injunctions to prevent violations which FAA has reason to believe are about to occur.

iv. Criminal prosecution which should be turned over to the proper authority for investigation.

v. The inspector must immediately notify the flight standards branch or the division manager of all facts and circumstances and complete an EIR as soon as possible. This goes for any type of complex or emergency type of action mentioned in Order 2150.3 or this chapter. The flight standards division will make further notification to other, appropriate offices as necessary.

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SECTION 5. SPECIAL CONSIDERATIONS

1. GENERAL. The following paragraphs contain information on some compliance areas where conflicting policies have frequently occurred. This information should be referenced by inspectors when investigating cases related to the special considerations.

2. RECKLESS OPERATION OF AIRCRAFT. Title 14 CFR § 91.13 {**91.9**} provides that, "No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another." Neither 49 U.S.C. nor the 14 CFR define "reckless" or "reckless manner." The NTSB, however, has in several cases dealt with the allegation that a particular operations was "reckless" within the meaning of 14 CFR § 91.13 {**91.9**} and has thus contributed towards a definition of the phrase, "reckless manner."

A. NTSB Case History. The cases studied by the NTSB indicate that recklessness involves *deliberate and willful conduct,* i.e., conduct that reflects a wanton disregard for others' safety.

(1) The inspector can infer a deliberate and willful disregard of the regulations or safety standards from the circumstances surrounding a violation.

(a) It need not be established that a pilot intended to be reckless but only that he or she intended to engage in deliberate or willful action which resulted in a deviation from 14 CFR or from safety standards and which created actual or potential danger to the life or property of another.

(b) For example, the NTSB said of a pilot whom it found to have been reckless when the pilot deliberately operated an aircraft within 50 to 200 feet of another aircraft for a period of five to 10 minutes --

> ". . . so long as the respondent intends to do the particular acts complained of, and the resulting action widely departs from the norm of reasonably prudent conduct, a finding of reckless operation does not require proof of the state of the pilot's mind but can be inferred from the nature of [the pilot's] acts or omissions and the surrounding circumstances."

(2) In one violation the airmen flew VFR in formation and proceeded into a mountainous area in IFR conditions at dusk without ascertaining the weather conditions. Neither pilot held an instrument rating, and one aircraft had an inoperative radio. The NTSB declared that the conduct of such a flight was reckless. The NTSB found that the conduct was "[. . .] so devoid of basic safe operating practices and adherence to critical safety regulations that it constituted a reckless operation."

B. Conduct Deemed Reckless. The fact patterns of some individual cases tried before the NTSB provide guidance about the kind of conduct that the NTSB will deem reckless. For example:

(1) The pilot of an aircraft, in an attempt to land on a highway in a non-emergency situation, approached from the rear and struck a moving truck. The truck was substantially damaged, and the person who was sitting in the middle of the front seat of the truck was seriously injured. The NTSB, after considering the circumstances surrounding the incident, found that the respondent operated the aircraft in a reckless manner.

(2) In another case an airman willfully and deliberately made several extremely close passes near a van for the purpose of causing apprehension or bodily harm to the occupants of the van. The NTSB wrote, "Such piloting can only be characterized as reckless operation which created a serious hazard to the van."

(3) The allegation of recklessness was affirmed by the NTSB in a case where an air carrier pilot operating an aircraft in scheduled air transportation took off from an airport after being advised that the reported visibility was 1/16 of a mile. The takeoff minimums were 1/4 of a mile. The NTSB held that the ". . . knowing violation of one of the standards applicable to air carrier pilots forms the basis of the finding of reckless operation."

(4) In another case where the NTSB found recklessness, the pilot violated several 14 CFR. The airman carried passengers on several flights when not rated in the aircraft, had no instruction or experience in the aircraft, the aircraft had not been issued an airworthiness certificate nor had been inspected for the issuance of the certificate, the aircraft had not undergone an annual inspection, and the aircraft carried no identification markings. The NTSB considered the entire range of circumstances and the broad areas of noncompliance with the regulations under which

numerous flights were conducted, many on which passengers were carried, a reckless operation.

(5) In another case, the airman was acting as pilot-in-command of an aircraft on a VFR, passenger-carrying flight carrying parachutists for compensation. The pilot deliberately performed an aileron roll. The seriousness of this violation was accentuated by the fact that the aircraft was not certificated for aerobatics, two parachutists were in the air when the roll was performed, the roll took place at an altitude of 500 to 800 feet over a group of persons on the ground, and the flight was made for compensation. The NTSB found the respondent's violations to be deliberate and knowing and, therefore, reckless.

(6) In another case the pilot-in-command flew the pilot's personal aircraft on a VFR, passenger-carrying flight. During the course of the flight, the aircraft entered clouds and subsequently crashed into a mountainside. The NTSB held that the ". . . respondent's continued VFR flight into clouds in the vicinity of mountainous terrain demonstrated inherently reckless conduct."

(7) A pilot was found to be reckless when that pilot ignored specific air traffic control instructions. Contrary to ATC instructions, the pilot failed to report downwind, landed the aircraft instead of going around, made a 180° turn on the runway, and departed via a taxiway. The NTSB noted that the go-around instruction was given four separate times by the controller, yet the pilot persisted with the approach and landing. The NTSB also stated that, " . . . it appears that [the pilot] made up his mind to land the aircraft and no amount of instruction from the tower could keep him from that goal." The pilot's operation of the aircraft was characterized as reckless.

C. Conclusion. While there is no regulatory definition of the term, "reckless," it has been defined in cases decided by the NTSB. *A reckless operation results from the operation of an aircraft conducted with a deliberate or willful disregard of the regulations or accepted standards of safety so as to endanger the life or property of another either potentially or actually.* Accordingly, any such reckless behavior violates 14 CFR § 91.13 **{91.9}**.

3. AIRWORTHY OR UNAIRWORTHY? The term "airworthiness" or one of its derivatives, is also not defined in 49 U.S.C. or 14 CFR. Nevertheless, a clear understanding of its meaning is an essential tool for the compliance program. Airworthiness is a concept that represents the substance of two of the most fundamental safety regulations, 14 CFR §§ 43.15(a) and 91.7(a) **{91.29}**.

A. Regulatory Background.

(1) Title 14 CFR § 43.15(a) states that each person conducting a 100-hour, annual, or progressive inspection required by 14 CFR part 91 must perform those inspections in such a manner as to determine whether the aircraft meets all applicable airworthiness requirements.

(2) Title 14 CFR § 91.7(a) **{91.29}** states that no one may operate a civil aircraft unless it is airworthy.

B. NTSB Decisions. The example below clearly expresses the view that an aircraft is airworthy only if it is capable of a safe operation AND it conforms to its type certificate.

(1) In this case the issue was whether the pilot had violated 14 CFR § 91.7(a) **{91.29}** by operating an aircraft that was not in an airworthy condition. The respondent had taxied the aircraft into a mud hole, causing the propeller to strike the ground. As a result one blade was bent and the other was nicked. Upon restarting the engine ran smoothly so that the pilot did not consider the damage to be significant. The pilot decided to give the aircraft a test flight and found that there was no unusual engine vibration or other indication of malfunction. The pilot then operated the aircraft from Nevada to Kansas to New York to Pennsylvania, and to several locations in Florida.

(2) Upon hearing the case after a subsequent investigation revealed the damage and the violation, the examiner held that the damage to the propeller caused it to be unairworthy and sustained the FAA allegation that the respondent had violated 14 CFR § 91.7(a) **{91.29}**. The examiner's findings were based on the theory that an aircraft is airworthy if it conforms to its type certification but that it is not airworthy if its original design and specifications are altered without FAA approval.

(3) The concept of airworthiness expressed in this case must be considered to be the correct one because it is the one which best lends itself to effective enforcement. It is supported clearly by some NTSB precedents and is reinforced by the framework of 49 U.S.C. and the practical operation of the FAA itself. The concept that an aircraft need only be capable of a safe operation to be airworthy cannot be applied effec-

tively because it places too much discretion in the individual pilot or mechanic, safety being a subjective value.

C. Additional Interpretations. A careful study of 49 U.S.C. indicates that the term airworthiness should be interpreted in the manner that it has been in the example above.

(1) Title 49 U.S.C., section 603(c) states that the registered owner of any aircraft may file an application for an airworthiness certificate. If the FAA finds that the aircraft conforms to the type certificate for that aircraft and determines, after inspection, that the aircraft is in condition for safe flight, the FAA issues the airworthiness certificate.

(2) The statutory language in section 603 clearly establishes that two tests be applied in determining whether the owner of an aircraft should be granted an airworthiness certificate. First, the aircraft must conform to the type certificate for that aircraft. Then, if that condition is met, the aircraft must be inspected to determine that it is in a condition which will permit its safe operation.

(3) The very term "airworthiness certificate" implies that an aircraft granted such a certificate is "airworthy." Therefore, an aircraft denied such a certificate is not airworthy. The plain meaning of section 603(c) indicates that 49 U.S.C. intended that an aircraft should not be considered to merit the issuance of an airworthiness certificate unless it conforms to the type certificate applicable to it. Therefore, it can be argued that 49 U.S.C. established the concept of airworthiness to mean, "...to be in conformance with the applicable type certificate as well as to be in a condition for safe operation..."

(4) The practical operation of the FAA should also be considered in determining which concept of airworthiness is most appropriate. If the term airworthy were interpreted to mean only to be in a condition for safe flight, at times it would be unreasonably difficult, if not impossible, to enforce the regulations which turn upon the meaning of that term. In order to prove that a pilot operated an unairworthy aircraft or that a mechanic certified an unairworthy aircraft as airworthy, the FAA sometimes would be required to undertake an extensive test-flight program of an aircraft that did not conform to the applicable type certificate.

(5) Moreover, if airworthy meant only to be in a condition for safe flight, it would render the entire airworthiness certification procedure meaningless. Title 49 U.S.C. provides for the issuance of a type certificate--a certificate that includes the type design as dictated by the type certification data in the aircraft's operating limitations and any other conditions or limitations prescribed in the applicable regulations. Title 49 U.S.C. specifies that the type certificate is to be referred to in determining whether an aircraft should be granted an airworthiness certificate. However, if an aircraft need only be capable of safe flight to be considered airworthy, after the original airworthiness certificate is issued, any mechanic could modify a particular aircraft in any manner that pleased the mechanic and the aircraft would be presumed to be airworthy unless the FAA could prove that the modification was in some way detrimental to the aircraft's flight characteristics or structural strength.

D. Conclusion. To be airworthy an aircraft must conform to its type certificate as well as be in a condition for safe operation. A word of caution is necessary, however, if this concept of airworthiness is to be applied effectively in enforcement cases. Where the evidence clearly demonstrates that the aircraft is not in a condition for safe operation, the NTSB will undoubtedly sustain a finding that the aircraft was unairworthy. However, if the condition of the aircraft is such that it would not be considered to be in conformance with the type certificate, **yet it is not clearly unsafe for flight**, then the NTSB will probably not sustain a finding that the aircraft is not airworthy in the absence of positive evidence concerning the contents of the type certificate data and the particulars in which the aircraft in question differs from that data.

4. VIOLATIONS ASSOCIATED WITH REGIONAL AND NATIONAL SPECIAL INSPECTIONS. This paragraph contains information on some of the problems that occur when inspection teams discover violations.

A. Problems with Special Inspection Violations.

(1) Sometimes the inspector team does not discuss suspected violations found during the inspection with the operator or with the local FSDO during the inspection or at the debriefing. There have been times when the FSDO has been advised during debriefing that no violations were found, only to be followed later, sometimes much later, with a report

which indicates that a number of violations were found.

(2) Many times the team includes alleged violations in special inspection reports when there is insufficient evidence included with the reports to prove the violations.

(3) One way to diminish the effectiveness of an enforcement action, especially one with any complexity, is to have one inspector investigate the violation and another to write the report. It is impossible to assure a 100% transfer of technical information from the investigating inspector to the reporting inspector. Therefore, the quality, timeliness, and overall effectiveness of the EIR is significantly diminished. It has been proposed that the members of the inspection team who find the violations be responsible for writing the report.

B. Solving the Problems. Since the crux of the problem appears to be the hand-off of information from the investigating inspector to the reporting inspector, it appears that better coordination and cooperation during the inspection is needed to help solve the problem.

(1) The special inspection team leader should immediately notify the appropriate FSDO principal inspector of any suspected violations found during the inspection. From that point on, the principal inspector should assist in the violation investigation.

(2) Before the inspection is completed, or at least before the inspection report is written, the team leader or the principal inspector should read and analyze the regulations involved and write a preliminary Summary of Facts on each section of 14 CFR believed violated and assure that there is sufficient evidence available to prove every word of it, in accordance with the instructions in this chapter.

(3) Whoever writes the preliminary Summary of Facts should test the Summary of Facts and supporting evidence with the other inspector before citing the occurrence as a violation in the inspection report.

APPENDIX 1. ACRONYMS AND ABBREVIATIONS

This appendix contains acronyms and abbreviations for both old as well as new General Aviation terms that are used throughout this Handbook. Inspectors can refer to the following alphabetical listing of frequently used acronyms and abbreviations and their meanings when using this Handbook.

14 CFR	Title 14 of the Code of Federal Regulations
49 U.S.C.	Title 49 of the United States Code
A/FD	Airport/Facility Directory
AC	Advisory Circular
ACCSS	air carrier cabin safety specialists
ACE	aerobatic competency evaluator
ACO	Aircraft Certification Office
ACR	airman certification representative
ADF	automatic direction finding
AFSS	automated flight service station
AFTN	aeronautical fix telecommunication
AH	alert height
AGL	above ground level
AIDS	Accident Incident Data Subsystem
AIP	Aeronautical Information Publication
ARFF	Aircraft Rescue and Fire Fighting Equipment
ASI	aviation safety inspector
AST	aviation safety technician
ATC	air traffic control
ATP	airline transport pilot
ATPE	airline transport pilot examiner
BFA	Balloon Federation of America
CAN	Center Area NOTAM
CAR	Civil Air Regulations
CASFO	Civil Aviation Security Field Office
CE	commercial pilot examiner
CFI	certificated flight instructor
CHDO	certificate holding district office
CIRE	commercial and instrument rating examiner
CMO	Certificate Management Office
CPL	commercial pilot license
CPM	certification project manager
CRW	canopy relative work
DH	decision height
CTA	control areas
DME	distance measuring equipment
DOD	Department of Defense
DPE	designated pilot examiner
EAA	Experimental Aircraft Association
EIR	Enforcement Investigation Report
EIS	Enforcement Information Subsystem
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FD	flight director
FDC	flight data center
FIE	flight instructor examiner
FIR	flight information regions
FIRC	flight instructor refresher clinic
FL	flight level
FM	flight manual
FMCS	flight management computer systems
FMS	flight management system

APPENDIX 1. ACRONYMS AND ABBREVIATIONS—Continued

FOI	fundamentals of instructing
FSAS	Flight Standards Automation System
FSDO	Flight Standards District Office
FSS	flight service station
FTD	flight training device
GPS	global positioning system
GSGC	Ground School Graduation Certificate
GTD	ground training device
HAZMAT	hazardous material
HF	high frequency
HUD	heads-up display
IAP	instrument approach procedures
ICAO	International Civil Aviation Organization
ICAS	International Council of Air Shows
IFO	International Field Office
IFP	Instrument Foreign Pilot
IFR	instrument flight rules
IGA	international general aviation
IIC	inspector-in-charge
ILS	instrument landing system
IMC	instrument meteorological conditions
INS	inertial navigation system
IRA	Instrument Rating Airplane
IRS	inertial reference systems
ISIS	Integrated Safety Information Subsystem
ISS	inertial sensor system
JAR	Joint Airworthiness Requirements
LAHSO	land-and-hold-short operations
LOA	letter of authorization
LORAN	long-range navigation
LRN	long-range navigation
LRNS	long-range navigation system
MC/FPE	military competency/foreign pilot examiner
MEL	minimum equipment list
MLS	microwave landing system
MNPS	Minimum Navigation Performance Specification
MSL	mean sea level
NAS	National Airspace System
NAT	North Atlantic
navaid	navigational aid
NDB	nondirectional beacon
NDPER	National Designated Pilot Examiner Registry
NEB	National Examiner Board
NFDC	National Flight Data Center
NM	nautical miles
NOTAM	Notice to Airmen
NTSB	National Transportation Safety Board
OCA	oceanic control areas
OJT	on-the-job training
PAI	principal avionics inspector
PCA	primary category aircraft
PE	private pilot examiner
PIC	pilot-in-command
POI	principal operations inspector
PPE	proficiency pilot examiner
PPM	PTRS Procedures Manual

APPENDIX 1. ACRONYMS AND ABBREVIATIONS—Continued

PTRS	Program Tracking and Reporting Subsystem
PTS	practical test standards
RAIM	receiver autonomous integrity monitoring
RVR	runway visual range
RVSM	Reduced Vertical Separation Minimum
SA	selective availability
SFAR	Special Federal Aviation Regulations
SIC	second-in-command
SODA	Statement of Demonstrated Ability
SOIR	simultaneous operations on intersecting runways (replaced by LAHSO)
SPG	Special Planning Group
STC	supplemental type certificate
TAF	terminal weather forecasts
TC	type certification
TCDS	type certificate data sheet
TCE	training center evaluator
TCO	training course outline
TSO	technical standard order
USNOF	United States NOTAM Office
USPA	United States Parachute Association
VFR	visual flight rules
VHF	very high frequency
VIS	Vital Information Subsystem VLA
VLF	very low frequency
V_{mc}	minimum controllable airspeed
VMC	visual meteorological conditions
VOR	VHF omni-directional radio range
V_{ref}	approach speed

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APPENDIX 2. INSPECTOR FEEDBACK

INFORMATION CURRENCY. The General Aviation and Commercial Division, AFS-800, has developed a revision process to ensure that the information contained in this handbook is current and correct. Any comments regarding content, whether to point out deficiencies or suggest improvements, should be directed to AFS-800. All comments will be reviewed and the handbook amended as appropriate. An inspector feedback sheet is provided on the following page.

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INSPECTOR FEEDBACK SHEET

Subject: [X] Order 8700.1, General Aviation Operations Inspector's Handbook, Change No. _____

To: Federal Aviation Administration
General Aviation & Commercial Division, AFS-800
800 Independence Ave., SW
Washington, DC 20591
ATTN: Handbook Project Manager

Please check all appropriate items. Attach a copy of the affected pages.

[ ] An error (procedural or typographical) has been noted in volume _____, chapter _____, section _____, paragraph _____ on page _____.

[ ] Recommend Volume _____, chapter _____, section _____, paragraph _____, page _____, be changed as follows: (Attach separate sheets if necessary).

[ ] Recommend a change to national policy in volume _____, chapter _____, section _____, paragraph _____, on page _____ as follows:

[ ] In a future change to this order, please cover the following subject (briefly describe what you want added):

[ ] Regional handbook standardization representative recommendation:

[ ] I would like to discuss the above. Please contact me.

Submitted by: _____ Date: _____
Telephone Number: _____ Routing Symbol: _____
Telemail Address: _____

APPENDIX 3. GENERAL AVIATION HANDBOOK BULLETINS

This appendix contains the uniform resource locator (URL) where current handbook bulletins for general aviation (HBGA) as of 4/10/01 are listed. All current/amended bulletins will be incorporated into the handbook during the normal Change cycle. HBGA's are available on the Internet World Wide Web AVR Home Page at URL http://www.faa.gov/avr/afs/hbga/hbgal.htm.

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APPENDIX 4. GENERAL AVIATION FLIGHT STANDARDS INFORMATION BULLETINS

Flight Standards Information Bulletins (FSIB) address issues requiring action, special emphasis programs, and time critical and/or temporary concerns. The FSIB enables the Flight Standards Service to disseminate information quickly to the community. The FSIB does not replace the handbook bulletin nor is it incorporated directly into handbook text. FSIB's are available on the Internet World Wide Web AVR Home Page at URL http://www.faa.gov/avr/afs/fsga/fsgal.htm.

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COMPREHENSIVE INDEX

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued

COMPREHENSIVE INDEX—Continued